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April 4, 2005

Via HAND DELIVERY

The Honorable Vernon A. Williams
Secretary
Surface Transportation Board
1925 K Street, NW
Washington, DC 20423

PUBLIC VERSION

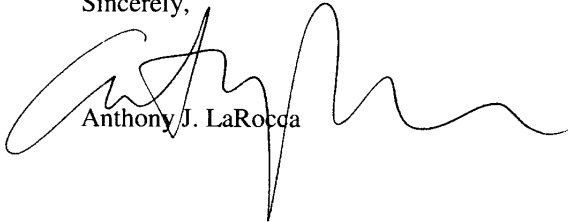
Re: **STB Docket No. 42071, *Otter Tail Power Company v. BNSF Railway Company***

Dear Secretary Williams:

Enclosed for filing in the above-captioned matter are the original and ten copies of the Public version of the Reply of BNSF Railway Company to Supplemental Evidence. This filing consists of one volume containing the Narrative and Exhibits. BNSF is also filing three copies of a CD containing a PDF version of the Narrative and Exhibits. BNSF is filing a Highly Confidential version of the Reply to Supplemental Evidence under a separate cover letter.

Please date stamp the extra copy of this cover letter and return it to the messenger who delivered this filing.

Sincerely,

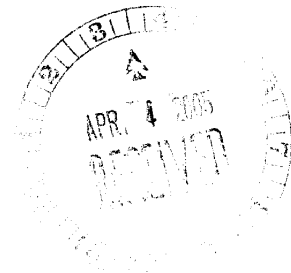

Anthony J. LaRocca

Enclosures
cc: Counsel for Complainant

PUBLIC VERSION

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

STB Docket No. 42071



**OTTER TAIL POWER COMPANY
v.
BNSF RAILWAY COMPANY**

**Reply of BNSF Railway Company
to Supplemental Evidence**

NARRATIVE & EXHIBITS

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April 4, 2005

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ABBREVIATIONS

Terms:

AVP	Assistant Vice President
BNSF	BNSF Railway Company
CTC	Centralized Traffic Control
DARA	Density Adjusted Revenue Allocation
DCF	Discounted Cash Flow
EIA	Energy Information Administration
FED	Failed Equipment Detector
FTI	FTI Consulting, Inc.
G&A	General and Administrative
HR	Human Resources
L&D	Loss & Damage
LMR	Land Mobile Radio
LUM	Locomotive Unit-Mile
MGT	Million Gross Tons
MMP	Modified Mileage Prorate
MOW	Maintenance of Way
MRL	Montana Rail Link
MSP	Modified Straight-Mileage Prorate
NS	Norfolk Southern Railway Co.
OTM	Other Track Materials
OTP	Otter Tail Power Company
OTRR	Otter Tail Railroad
PRB	Powder River Basin
RRVW	Red River Valley and Western Railroad
RCAF	Rail Cost Adjustment Factor
RCAF-A	Rail Cost Adjustment Factor, adjusted for changes in productivity
RCAF-U	Rail Cost Adjustment Factor, unadjusted for changes in productivity
RTC	Rail Traffic Controller
SAC	Stand-Alone Cost
SARR	Stand-Alone Railroad
STB	Surface Transportation Board
T&E	Train and Engine Crew
TMPA	Texas Municipal Power Agency
UP	Union Pacific Railway Company
URCS	Uniform Railroad Costing System

CASE NAMES

<i>AEPCO</i>	<i>Arizona Electric Power Cooperative, Inc. v. The Burlington Northern and Santa Fe Railway Company</i> , STB Docket No. 42058 (STB served August 20, 2002)
<i>Coal Rate Guidelines</i>	<i>Coal Rate Guidelines, Nationwide</i> , 1 I.C.C.2d 520 (1985)
<i>CP&L or CP&L/NS</i>	<i>Carolina Power and Light Company v. Norfolk Southern Railway Company</i> , STB Docket No. 42072 (STB served December 23, 2003)
<i>Duke v. CSX or Duke/CSX</i>	<i>Duke Energy Corporation v CSX Transportation, Inc.</i> , STB Docket No. 42070 (STB served February 4, 2004)
<i>Duke v. NS or Duke/NS</i>	<i>Duke Energy Corporation v. Norfolk Southern Railway Company</i> , STB Docket No. 42069 (STB served on November 6, 2003)
<i>General Procedures</i>	<i>General Procedures for Presenting Evidence in Stand-Alone Cost Rate Cases</i> , STB Ex Parte No. 347 (Sub-No.3) (served March 12, 2001)
<i>Nevada Power II</i>	<i>Bituminous Coal-Hiawatha Utah, to Moapa, Nevada</i> , 10 I.C.C.2d 253 (1994)
<i>OPPD</i>	<i>Omaha Public Power Dist. v. The Burlington Northern Railway</i> , 3I.C.C.2d 853 (1987)
<i>PPL I</i>	<i>PPL Montana, LLC v. The Burlington Northern and Santa Fe Railway Company</i> , STB Docket No. 42054 (STB served August 19, 2002)
<i>PPL II</i>	<i>PPL Montana, LLC v. The Burlington Northern and Santa Fe Railway Company</i> , STB Docket No. 42054 (STB served March 24, 2003)
<i>PPL III</i>	<i>PPL Montana, LLC . The Burlington Northern and Santa Fe Railway Company</i> , STB Docket No. 42054 (STB served August 31, 2004)
<i>TMPA</i>	<i>Texas Municipal Power Agency v. The Burlington Northern and Santa Fe Railway Company</i> , STB Docket No. 42056 (served March 24, 2003)
<i>Xcel</i>	<i>Public Service Company of Colorado D/B/A Xcel Energy v. The Burlington Northern and Santa Fe Railway Company</i> , STB Docket No. 42057 (STB served June 8, 2004) and (STB served January 19, 2005)

I: Counsel's Argument and
Summary of Evidence

I. COUNSEL'S ARGUMENT AND SUMMARY OF EVIDENCE

This is the Reply of Defendant BNSF Railway Company ("BNSF") to the Supplemental Evidence filed by complainant Otter Tail Power Company ("Otter Tail") on March 1, 2005, as modified by Otter Tail's March 14, 2005 Errata.

Supplemental evidence was filed on March 1, 2005 by both parties pursuant to an order served by the Board on December 13, 2004 that instructed the parties to present evidence addressing two issues. First, the Board instructed the parties to present modified SAC calculations based on a SARR that handled a specified traffic group. Otter Tail was instructed to modify the traffic group it used to prepare its "alternative" rebuttal case¹ by excluding certain rerouted intermodal traffic using the SARR's northern line. BNSF was instructed to modify the traffic group it presented in the March 22, 2004 Supplemental Reply by including certain southbound PRB traffic. December 13, 2004 Decision at 3. Both parties were instructed to present revised SAC calculations based on the new traffic group. The parties were also instructed "to address how [the Board] might assure that any rate prescription resulting from the SAC analysis would not reflect an impermissible cross-subsidy." December 13, 2004 Decision at 3.

The parties complied with the Board's instructions. This Reply addresses Otter Tail's revised SAC assumptions and it addresses Otter Tail's cross-subsidy analysis. As to Otter Tail's revised SAC calculations, BNSF explains below that it has accepted Otter Tail's revised mainline capacity and transit time assumptions that are based on the output of Otter Tail's new

¹ There has been a proliferation of SAC scenarios in this case as Otter Tail has searched for a way to support its rate reasonableness claims. BNSF described the evolution of Otter Tail's SAC presentations in the March 1, 2005 Supplemental Evidence at Nar. III.A-1 to 6. Otter Tail's "alternative" case is described in BNSF's Supplemental Evidence at Nar. III.A-3 to 4.

operating model. Therefore, BNSF presents in this Reply revised SAC calculations based on Otter Tail's mainline capacity and transit time assumptions.

BNSF also explains below that both parties are in agreement that the Board should apply the test developed in the *PPL* case to determine whether Otter Tail has impermissibly relied on a cross-subsidy from the short-haul traffic using only the north-south facilities of the OTRR. As BNSF explains, Otter Tail's own cross-subsidy analysis, based on its understated costs and overstated revenues, shows that the OTRR traffic using the east-west facilities generates revenues that cover its collective attributable costs by a relatively small amount. Minor increases in the costs used in Otter Tail's cross-subsidy analysis will result in a cross-subsidy finding under *PPL* that would require dismissal of Otter Tail's complaint.

A. REVISED SAC CALCULATIONS

In its Supplemental Evidence, Otter Tail made two significant changes from its prior evidence. First, as instructed by the Board, Otter Tail eliminated from the OTRR traffic group the intermodal traffic moving between Glendive and Fargo that had been rerouted from its real-world route of movement on BNSF's northern Minot line. The Board also instructed BNSF to present SAC evidence based on a traffic group comparable to the traffic group as modified by Otter Tail. A comparison of the parties' traffic group assumptions is set out in Table III.A-1. While the parties' volume assumptions are now comparable for purposes of this Reply to Otter Tail's Supplemental Evidence, the parties' revenue assumptions continue to differ substantially due principally to differences in the parties' allocation of revenue on cross-over traffic between the OTRR and the residual incumbent. See Table III.A-2 below.

Otter Tail's second major change was to use the Rail Traffic Controller ("RTC") model instead of the string program to assess the capacity requirements of the OTRR and to develop operating statistics and operating costs for the OTRR. BNSF had used the RTC model to assess

capacity and operating statistics on portions of the OTRR in BNSF's Reply and Supplemental Reply Evidence, and the Board indicated in its December 13, 2004 and February 18, 2005 orders that Otter Tail could submit its supplemental evidence based on the RTC model.

Otter Tail's RTC analysis indicates that the OTRR would require 1,485 miles of mainline track. Otter Tail Supp. Evidence Errata Nar. Table III-B-6. BNSF's March 1, 2005 Supplemental Evidence assumed that the OTRR would need 1,411 mainline track miles. (As explained below, BNSF accepts Otter Tail's mainline capacity for purposes of this Reply.) *See* BNSF Supp. Evidence Table III.B-3.² As to yards, Otter Tail assumes yard capacity of 66.72 track miles (Otter Tail Supp. Evidence Table III-B-7) compared to BNSF's yard capacity of 91.22 (BNSF Supp. Evidence Table III.B-3).

As a result of its changes to capacity and its use of a new operating model, Otter Tail also modified its transit time assumptions for OTRR trains. Transit times are the basis for SARR equipment requirements. Otter Tail's revised transit time assumptions are set out in BNSF Reply to Supp. Exhibit III.C-1. The transit times produced by Otter Tail's RTC analysis are somewhat faster than the transit times assumed by BNSF in its Supplemental Evidence. BNSF Reply to Supp. Exh. III.C-1 sets out the transit time differences.

BNSF explains in Section III.B.2 below that while there are several errors in Otter Tail's assumptions about the particular trains that would operate during the time period modeled by the RTC, Otter Tail's RTC analysis can nevertheless be used to assess the adequacy of the OTRR mainline capacity and mine spurs. Therefore, BNSF accepts Otter Tail's revised mainline capacity assumptions for purposes of this Reply to Otter Tail's Supplemental Evidence.

² The 1,411 mainline track miles include the mainline track miles and mine spur miles from Table III.B-3 of BNSF's Supplemental Evidence. Otter Tail's 1,485 mainline track miles also include mine spurs.

Moreover, since Otter Tail's transit time assumptions are directly based on its revised mainline capacity assumptions, BNSF also accepts Otter Tail's mainline transit times.

However, BNSF does not accept Otter Tail's assumptions regarding yard capacity or yard dwell times. Those assumptions do not flow from Otter Tail's RTC analysis but rather are based directly on flawed assumptions made by Otter Tail's operating witnesses about the activities that must be carried out in OTRR yards and the time that would be required to carry out those activities. As BNSF explains in Section III.B.3 below, BNSF previously demonstrated that Otter Tail's witnesses understated the times that would be required to service OTRR trains and therefore understated both the yard dwell times for OTRR trains and the capacity needed in the yards to accommodate the longer dwell times. BNSF has previously identified the proper yard dwell times and the proper yard capacity needed to carry out all required yard activities. BNSF continues to use its prior yard capacity and dwell time assumptions for purposes of this Reply to Otter Tail's Supplemental Evidence.

In addition, while BNSF accepts the transit times produced by Otter Tail's RTC analysis, BNSF does not accept the methodology used by Otter Tail to produce operating statistics from those transit time assumptions. As explained in Sections III.C and III.D below, Otter Tail's RTC analysis covered one week of operations. Otter Tail extrapolated from the operating statistics generated by the trains operating during this week to develop annualized operating statistics. It then applied a convoluted and inappropriate methodology to produce operating statistics for the base year. Because of flaws in Otter Tail's train assumptions for the modeled week, as well as distortions inherent in the ratio used to produce annual base-year statistics from the RTC data, Otter Tail's calculations cannot be used to produce OTRR operating statistics. Moreover, there is no need to use Otter Tail's methodology to develop operating statistics by extrapolating from

the trains operating during the modeled week, since the operating statistics needed to calculate operating costs and equipment requirements for an entire year can be directly identified by examining all trains assumed to operate during the year.

Therefore, for purposes of this Reply to Otter Tail's Supplemental Evidence, BNSF has revised its operating cost assumptions using the mainline transit times produced by Otter Tail's RTC model while substituting BNSF's yard dwell time assumptions for the yard dwell times assumed by Otter Tail. With these data, BNSF's operating cost experts produced revised cycle time assumptions which BNSF used to calculate revised equipment ownership and maintenance requirements. BNSF modified its locomotive unit mile (LUM) and car-mile calculations to account for its acceptance of Otter Tail's route and track miles and it adjusted operating costs based on these revised statistics. BNSF also explains that Otter Tail misused the RTC model output to produce understated road crew requirements, and BNSF presents revised crew calculations to address these flaws. In addition, Otter Tail's expanded mainline capacity (particularly the large number of additional switches and turnouts that Otter Tail now assumes) required a minor adjustment to MOW costs.

BNSF's construction cost experts modified BNSF's construction cost assumptions to reflect the changes in mainline capacity identified by Otter Tail. *See* Section III.F below. BNSF based its yard construction costs on BNSF's assumed yard capacity for the reasons noted above. BNSF made no changes in the methodology it has previously used to calculate construction costs or in the unit costs used in its cost calculations.

BNSF presents the results of its modified SAC assumptions in Section III.H below.³ BNSF's use of Otter Tail's revised RTC assumptions on capacity and transit times does not produce SAC results as calculated by BNSF for purposes of this Reply to Otter Tail's Supplemental Evidence that are significantly different from those BNSF presented in its March 1, 2005 Supplemental Evidence. *See* BNSF Supp. Evidence Nar. at III.H-1. BNSF Reply to Supp. Exhibits III.H-1 and III.H-2 contain BNSF's revised SAC results using the DARA and modified MSP revenue allocation methodologies. In both cases, it is clear that Otter Tail has failed to demonstrate that the challenged rates exceed a reasonable maximum rate.

B. CROSS-SUBSIDY ISSUE

Both parties agree that the Board's *PPL* decisions set forth the methodology for determining whether a complainant's SAC presentation is based on an impermissible cross-subsidy. Both parties also carry out the cross-subsidy analysis by examining the collective attributable costs of the less dense portion of the OTRR starting at Cambell, WY, and the revenues generated by the traffic using that portion of the OTRR.⁴ While the basic cross-subsidy analyses of the two parties are similar, the cost and revenue assumptions used to carry out the cross-subsidy analyses differ because of underlying differences in the parties' assessment of SAC costs and revenues.

BNSF demonstrated in its cross-subsidy analysis that when proper costs and revenues are used, the revenues available to the OTRR from the traffic using the east-west facilities do not

³ For the convenience of the Board, BNSF is submitting a complete set of workpapers corresponding to the SAC analysis in this Reply to Otter Tail's Supplemental Evidence, including workpapers that have not changed.

⁴ An alternative cross-subsidy analysis presented by Otter Tail based only on the Glendive-Fargo section of the OTRR is not particularly instructive because the traffic using that portion of the OTRR is not significantly different from the traffic using the Campbell-Glendive portion.

cover the collective attributable costs of those facilities and Otter Tail's complaint should be dismissed. Otter Tail's cross-subsidy analysis, in contrast, purports to show that the revenues from the east-west traffic exceed the collective attributable costs of that traffic.⁵ However, even using Otter Tail's cost and revenue assumptions, it is clear that the revenues generated by the traffic using the east-west facilities exceed the collective attributable costs of those facilities by a margin that is significantly smaller than the supposed overcharge that Otter Tail calculates for the OTRR as a whole.⁶

This conclusion, reached by Otter Tail's own analysis, is extremely important. It shows that after more than three years of litigation, numerous changes in traffic group and operating assumptions, and a gross understatement of costs, Otter Tail's own evidence shows only a marginal overcharge on the traffic using the east-west lines, including the issue traffic. Indeed, Otter Tail's own analysis suggests that even modest increases in Otter Tail's cost assumptions after the Board resolves the parties' evidentiary disputes will result in a finding, like the Board's finding in the similar *PPL* cross-subsidy analysis, that the east-west traffic does not generate revenues sufficient to cover its collective attributable costs and that the complaint should be dismissed. This is discussed further below in Section III.A.

Otter Tail's cross-subsidy analysis also demonstrates that the rate reduction Otter Tail seeks in this case is grossly overstated, even if Otter Tail's cost and revenue assumptions were accepted in their entirety. For example, in the year 2004, Otter Tail purports to show that

⁵ See OTP Errata to Supplemental Evidence folder "Alternative\Campbell West" wp "EXHIBIT-III-H-4-FP.123," tab "Netting." Otter Tail's electronic workpapers are difficult to use, so BNSF has reproduced Otter Tail's cross-subsidy results in BNSF Reply to Supp. Exhibit III.A-2.

⁶ See OTP Errata to Supplemental Evidence folder "Alternative\III-H" wp "EXHIBIT-III-H-4-FP.123," tab "Netting." For the Board's convenience, BNSF also produces Otter Tail's DCF for the entire OTRR at BNSF Reply to Supp. Exhibit III.A-3.

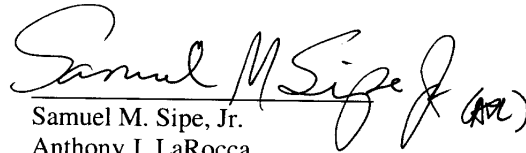
revenues on the east-west traffic should be reduced by less than 10 percent to eliminate any overcharge on that traffic, while Otter Tail's SAC calculations for the OTRR as a whole purport to show a rate reduction in 2004 of 25 percent. The difference in the magnitude of these two rate reduction assumptions is directly attributable to the subsidy that Otter Tail seeks from the traffic using only the north-south facilities of the OTRR. Absent this subsidy, 10 percent would be the *maximum* rate reduction in the year 2004 that could be justified for the issue traffic, even if all of Otter Tail's cost and revenue assumptions were accepted. This issue is also discussed further below in Section III.A.

C. CONCLUSION

Otter Tail's RTC analysis can be used to assess the mainline capacity for an OTRR configured to handle the traffic group that is the subject of the parties' Supplemental Evidence. That analysis can also be used to assess mainline transit times for trains on the OTRR. BNSF has revised its SAC calculations to incorporate these revised assumptions. BNSF demonstrates in this Reply to Otter Tail's Supplemental Evidence that when the output of Otter Tail's RTC model is properly used, and when the proper cost and revenue calculations are used, SAC costs

exceed SAC revenues. Otter Tail has failed to demonstrate that the challenged rates exceed a reasonable maximum rate and its complaint should be dismissed.

Respectfully submitted,

A handwritten signature in black ink, reading "Samuel M. Sipe, Jr." with a stylized flourish at the end.

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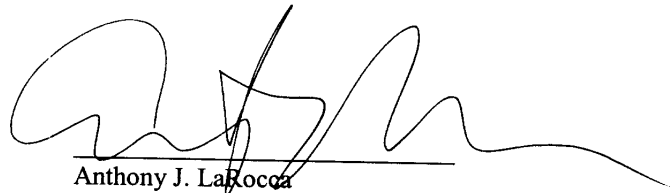
Attorneys for BNSF Railway Company

April 4, 2005

CERTIFICATE OF SERVICE

I hereby certify that on April 4, 2005, I caused six copies of the foregoing Reply of BNSF Railway Company to Supplemental Evidence, to be served by hand upon the following counsel for Otter Tail Power Company.

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III. A: Traffic Group

growth assumptions, but BNSF has excluded from the projected OTRR traffic group coal moving to Xcel's Riverside and Highbridge plants beginning in 2007 and it modified the tonnage growth assumptions for movements to Superior Dock to account for capacity limitations at Superior Dock. In addition, BNSF has eliminated from the OTRR traffic group movements to OPPD's North Omaha and Arbor plants beginning in 2004. *See* BNSF Supp. Evidence Nar. at III.A-1 to 11.

The parties' traffic volume assumptions for purposes of the Supplemental Evidence over the 20-year DCF period are set out below in Table III.A-1.

Table III.A-1
Comparison of OTRR Tonnage Forecast by Otter Tail
and BNSF in Supplemental Evidence
(Millions)²

Year	Coal Volumes		Non-Coal Volumes		Total	
	<u>Otter Tail</u>	<u>BNSF</u>	<u>Otter Tail</u>	<u>BNSF</u>	<u>Otter Tail</u>	<u>BNSF</u>
	a	b	c	d		
2002	212.1	212.1	7.5	7.5	219.6	219.6
2003	211.4	211.3	7.5	7.5	218.8	218.8
2004	213.3	208.3	7.5	7.5	220.8	215.8
2005	215.2	209.4	7.5	7.5	222.7	216.9
2006	219.3	213.2	7.5	7.5	226.8	220.7
2007	224.0	216.2	7.5	7.5	231.5	223.7
2008	227.4	219.4	7.5	7.5	234.9	226.9
2009	230.0	221.7	7.5	7.5	237.5	229.2
2010	233.9	225.4	7.5	7.5	241.4	232.9
2011	235.9	226.8	7.5	7.5	243.4	234.3
2012	237.2	227.5	7.5	7.5	244.7	235.0
2013	238.0	227.9	7.5	7.5	245.5	235.3
2014	238.4	228.2	7.5	7.5	245.9	235.7
2015	238.8	228.6	7.5	7.5	246.3	236.1
2016	239.4	229.1	7.5	7.5	246.8	236.5
2017	240.0	229.6	7.5	7.5	247.5	237.1
2018	240.4	229.9	7.5	7.5	247.9	237.4
2019	240.8	230.3	7.5	7.5	248.3	237.8
2020	241.2	230.6	7.5	7.5	248.7	238.1
2021	241.3	230.7	7.5	7.5	248.8	238.1

The parties continue to differ substantially regarding the revenues that would be available to the OTRR from this traffic group. The principal differences stem from a disagreement over the proper treatment of cross-over traffic and the proper allocation of revenues on cross-over

² Sources include the following: (a) Otter Tail Supp. Evidence electronic workpaper "Otter Tail Railroad Coal Traffic Forecast rebuttal alt XGF.xls" worksheet "2002-2021 Tonnage," (b) BNSF Supp. Evidence electronic workpaper "Otter Tail Railroad Coal Traffic Forecast_BNSF Supp.xls" worksheet "Summary," (c) Otter Tail Supp. Evidence electronic workpaper "ottertailsac02x rebuttal alt XGF.xls," and (d) BNSF Supp. Evidence electronic workpaper "Otter Tail Railroad Coal Traffic Forecast_BNSF Supp.xls" worksheet "2002-2021 Tonnage."

traffic between a SARR and the residual incumbent. BNSF has proposed two alternative methodologies in this case for calculating the revenues to be credited to the OTRR on cross-over traffic, the density adjusted revenue allocation procedure (“DARA”) and the Board’s MSP approach using modified origination credits. Otter Tail’s “alternative” case uses the MSP methodology without any changes to the origination credits. The parties also continue to differ on the proper escalation of revenues over the 20-year DCF period. This difference is driven primarily by the parties’ different assumptions about the rates that can be expected when existing contracts expire.

The parties’ revenue assumptions for the Supplemental Evidence traffic group over the 20-year DCF period are set out below in Table III.A-2.

Table III.A-2
Comparison of OTRR Revenue Forecast by Otter Tail
and BNSF in Supplemental Evidence
(\$Millions)³

Year	Otter Tail	BNSF	
		<u>DARA</u>	<u>Adjusted MSP</u>
	a	b	c
2002	\$583.0	\$474.9	\$485.6
2003	\$582.3	\$472.0	\$480.8
2004	\$585.0	\$480.0	\$488.8
2005	\$599.2	\$485.6	\$494.6
2006	\$622.7	\$496.7	\$505.7
2007	\$648.2	\$489.3	\$498.4
2008	\$670.6	\$504.4	\$513.8
2009	\$690.7	\$518.8	\$528.4
2010	\$714.8	\$535.9	\$545.7
2011	\$735.4	\$547.9	\$558.0
2012	\$754.3	\$553.0	\$562.4
2013	\$771.8	\$561.4	\$570.7
2014	\$787.5	\$565.9	\$575.1
2015	\$803.3	\$575.6	\$585.0
2016	\$820.1	\$585.8	\$595.3
2017	\$837.4	\$596.2	\$605.7
2018	\$854.2	\$606.4	\$616.1
2019	\$871.7	\$616.9	\$626.7
2020	\$889.6	\$627.6	\$637.5
2021	\$906.7	\$637.0	\$647.2

³ Sources include the following: column (a) -- Otter Tail Supp. Evidence electronic workpapers "Otter Tail Railroad Coal Traffic Forecast rebuttal alt XGF.xls" worksheet "2002-2021 Tonnage" and "ottertailsac02x rebuttal alt XGF.xls"; column (b) -- BNSF Supp. Evidence electronic workpaper "Otter Tail Railroad Coal Traffic Forecast_BNSF Supp.xls" worksheet "Summary," and BNSF March 22, 2004 Supp. Reply electronic workpaper "non-coal revenues_supp.xls"; and column (c) -- BNSF Supp. Evidence electronic workpapers "Otter Tail Railroad Coal Forecast_BNSF Supp.xls" worksheet "2002-2021 Tonnage," and "coal move_supp.xls," BNSF March 22, 2004 Supp. Reply electronic workpaper "non-coal revenues (supp).xls," and "non-coal revenues_supp.xls." For the Board's convenience, BNSF has linked the workpapers that present base year coal and non-coal revenues with the workpapers that apply escalation to produce the 20-year revenue stream. See BNSF Reply to Supp. Evidence electronic workpapers "Otter Tail Railroad Coal Traffic Forecast_BNSF Supp Adj MSP.xls," worksheet "summary," and "non-coal revenues_summary.xls."

2. Cross-Subsidy Analysis

The Board's December 13, 2004 order also instructed the parties "to address how [the Board] might assure that any rate prescription resulting from the SAC analysis would not reflect an impermissible cross-subsidy." December 13, 2004 Decision at 3. In its Supplemental Evidence, BNSF explained that the Board can eliminate the effects of any cross-subsidy in the assessment of the reasonableness of the challenged rate and, if the rate is found to be unreasonable, in the prescription of a maximum reasonable rate, by applying the test for cross-subsidy set out by the Board in *PPL*. That test involves a comparison of (a) the revenues that would be available to the SARR from traffic using the longer, lower-density route, to (b) the collective attributable costs of that traffic, *i.e.*, the costs that the SARR would incur by handling that traffic. BNSF noted that application of the *PPL* test is particularly appropriate here given the similarity in the characteristics of the SARRs at issue in both cases. *See* BNSF Supp. Evidence Nar. at III.A-25 to 28.

In this Reply, BNSF has modified its cross-subsidy analysis to account for the changes in OTRR capacity and operating costs that result from BNSF's acceptance of Otter Tail's RTC results for OTRR mainline operations. No other changes were made. The results of BNSF's revised cross-subsidy analysis are set out in BNSF Reply to Supp. Exhibit III.A-1.

Otter Tail agrees that the Board should apply the *PPL* test to determine whether the complainant's evidence is based on an impermissible cross-subsidy. *See* Otter Tail Supp. Evidence Nar. at III-A-4 to 7. Otter Tail also agrees with BNSF that the proper focus of the cross-subsidy analysis should be the lower density OTRR lines west of Campbell, WY, used by the OTRR's long-haul traffic, including the issue traffic. The results of Otter Tail's cross-

subsidy analysis are reproduced here for the Board's convenience at BNSF Reply to Supp.

Exhibit III.A-2.⁴

The parties' basic cross-subsidy analyses are conceptually similar, but their implementation of those analyses differs in two significant respects. First, BNSF allocated indirect operating expenses to the east-west and north-south OTRR lines in a way that more accurately identifies costs directly attributable to the east-west traffic group than the methodology used by the Board in *PPL*. See BNSF Supp. Evidence Nar. at III.A-31 to 32. Otter Tail claims to have used the Board's *PPL* methodology to allocate indirect operating costs, but Otter Tail's actual allocation methodology does not follow the Board's *PPL* methodology. BNSF has not been able to determine the allocation assumptions that Otter Tail actually used to identify indirect operating costs attributable to the east-west traffic.

Second, each party used its own cost and revenue calculations in the cross-subsidy analysis. Therefore, the collective attributable costs of the east-west traffic in BNSF's cross-subsidy analysis are considerably higher than the collective attributable costs in Otter Tail's analysis, even though the traffic group, operating assumptions and line configuration are similar. The revenues assumed to be generated by the east-west traffic group are also different, but those differences are much smaller than the differences on costs.⁵

⁴ Otter Tail presented two cross-subsidy analyses, one that focused on the OTRR lines from Campbell to Glendive to Fargo to Big Stone, and a second that focused only on the OTRR's Glendive to Fargo to Big Stone lines. BNSF Reply to Supp. Exhibit III.A-2 contains the first of these analyses from Otter Tail's March 14, 2005 errata workpapers. The latter analysis -- relating only to the Glendive-Fargo-Big Stone lines -- is not particularly instructive since the traffic moving on the Campbell to Glendive line is virtually identical to the traffic moving on the Glendive to Fargo line.

⁵ It is significant that the parties' revenue assumptions in their cross-subsidy analyses are similar because, in contrast, there is a vast difference between the parties' revenue assumptions in the SAC calculations done for the OTRR as a whole. See Otter Tail Supp. Evidence electronic workpaper "Otter Tail Railroad Coal Traffic Forecast rebuttal alt XGF.xls," tab "2002-2021

BNSF's cross-subsidy analysis shows that the revenues generated by the east-west traffic do not exceed the collective attributable costs of that traffic. Therefore, if BNSF's costs and revenues are used, the cross-subsidy analysis demonstrates that Otter Tail's complaint should be dismissed. The traffic using the east-west facilities, including the issue traffic, does not generate revenues sufficient to cover the costs of the facilities required to provide service to those shippers.

In contrast, Otter Tail's cross-subsidy analysis purports to show that revenues from the east-west traffic exceed the collective attributable costs of that traffic. However, it is also clear from Otter Tail's cross-subsidy analysis that the *amount* of the supposed overcharge on the east-west traffic is relatively small, even using Otter Tail's cost and revenue assumptions. For example, for the year 2004, the revenues generated by the east-west traffic would need to be reduced by less than 10 percent to eliminate any overcharge on the east-west traffic, even using Otter Tail's assumptions.⁶

Otter Tail's cross-subsidy showing has two important implications. First, the relatively small overcharge that Otter Tail calculates for the east-west traffic would be completely

Tonnage," and BNSF Supp. Evidence electronic workpaper "Otter Tail Railroad Coal Traffic Forecast_BNSF Supp.xls," tab "Summary (C-S)." The reason that the parties are much closer to agreement on revenues in the cross-subsidy analysis is that their cross-subsidy analyses do not consider the short-haul traffic using only the OTRR's north-south lines. This indicates that the primary differences between the parties' revenue calculations for the overall SARR relate to the allocation of revenue on the short-haul traffic on the north-south lines. BNSF has explained that Otter Tail's use of the Board's MSP methodology to allocate revenues on the short-haul traffic between the OTRR and the residual incumbent distorts the revenue calculations on short-haul traffic because the 100-mile origination credit in the Board's MSP methodology substantially overcompensates the OTRR for the minimal work it does to provide service to the shippers using the OTRR's north-south lines. *See* BNSF Supp. Reply Exh. III.A-9.

⁶ *See* BNSF Reply to Supp. Exhibit III.A-2 at page 26. As noted previously, this exhibit is a copy of Otter Tail's cross-subsidy DCF analysis. The overcharge on east-west traffic increases somewhat over the entire 20-year term in Otter Tail's DCF analysis, but it is still far less than the overcharge calculated by Otter Tail for the OTRR.

eliminated by modest increases in the cost assumptions used in Otter Tail's cross-subsidy analysis. When the Board resolves the disputes between the parties on cost issues, it is virtually certain that Otter Tail's costs will increase, even if the Board does not accept all of BNSF's cost assumptions. For example, Otter Tail's cross-subsidy analysis applies the RCAF-A index to escalate operating costs. The Board has concluded, however, that the use of the RCAF-U is superior to the RCAF-A in a SAC analysis in light of the fact that the SARR is a brand new entrant into the market that uses state of the art equipment and technology. Substituting the RCAF-U for the RCAF-A in Otter Tail's analysis, without making any other changes, decreases the supposed overcharge on the east-west traffic and supports a revenue reduction in the year 2004 of only 7 percent.⁷ The remaining overcharge would be eliminated by small increases Otter Tail's construction cost assumptions.

The second conclusion that can be drawn from Otter Tail's cross-subsidy analysis is that the *maximum* rate reduction that could be justified in this case is far below the rate reduction sought by Otter Tail -- even if all of Otter Tail's SAC assumptions were accepted. For example, as noted above, in the year 2004, the maximum rate reduction would be about 10 percent (before any changes are made to Otter Tail's underlying cost and revenue assumptions). Otter Tail's SAC calculations for the OTRR as a whole, which include the revenues and costs associated with the OTRR north-south lines, purport to show a 25 percent reduction for the year 2004. (The purported rate reduction increases over the DCF period.)⁸ However, applying the 25 percent reduction sought by Otter Tail for 2004 to the revenues contributed by the east-west traffic (and

⁷ BNSF Reply to Supp. Evidence electronic workpapers "EXHIBIT-III-H-4-FP OTP ERR CW.123."

⁸ See BNSF Reply to Supp. Exhibit III.A-3, which reproduces for the Board's convenience Otter Tail's DCF analysis, "alternative" case, for the OTRR as a whole.

the larger rate reduction in later years of the DCF analysis) would not just eliminate any overcharge on traffic using the east-west facilities. Rather, a rate reduction of that magnitude would produce a SARR whose east-west lines do not generate revenues sufficient to cover their cost. Under those circumstances, the SARR would never build the east-west lines. *See* BNSF Supp. Evidence Nar. at III.A-35 to 39.

III.B: Stand-Alone
Railroad

B. STAND-ALONE RAILROAD SYSTEM

1. Route Miles

As explained below, BNSF has accepted Otter Tail's mainline track mile calculations for purposes of this Reply to Otter Tail's Supplemental Evidence. Since track miles and route miles are directly related, BNSF also accepts Otter Tail's route mile calculations. Accordingly, the OTRR that is the subject of BNSF's SAC calculations in this Reply is assumed to have 1207.68 route miles.

2. Track Miles

The track mile calculations in a SAC case reflect the capacity of the SARR. Otter Tail's prior calculations of OTRR mainline capacity were based on a string program model. BNSF has addressed the flaws in that string program model in prior filings. In its Supplemental Evidence, Otter Tail used the RTC model to determine OTRR capacity requirements. BNSF also used the RTC model to assess capacity on discrete sections of the OTRR in BNSF's prior evidence, while it accepted Otter Tail's capacity assumptions for the other sections of the OTRR. The Board's December 13, 2004 order, as clarified by the Board's February 18, 2005 decision, indicated that Otter Tail could use the RTC model to prepare its Supplemental Evidence, and that it could present an RTC analysis of the entire OTRR in the Supplemental Evidence.

The first capacity analysis carried out by Otter Tail with the RTC model for purposes of Otter Tail's March 1, 2005 Supplemental Evidence indicated that the OTRR needed 1,482.52 mainline track miles. *See* Otter Tail's March 1, 2005 Supp. Evidence Nar. at III-B-2. Otter Tail modified its RTC analysis for purposes of its March 14, 2005 Errata. The new RTC analysis determined that the OTRR would need 1,485.00 mainline track miles. As Otter Tail explained in its March 14, 2005 Errata, the difference between the two calculations is attributable to the

addition of a second southbound spur at the North Antelope/Rochelle mine. *See* Otter Tail's March 14, 2005 Supp. Evidence Errata Nar. at III-B-1.

BNSF has reviewed Otter Tail's RTC analysis and has determined that notwithstanding certain flaws in Otter Tail's RTC analysis that are addressed below in Section III.C.3 of this Narrative, Otter Tail's mainline capacity assessment is acceptable for purposes of this Reply to Otter Tail's Supplemental Evidence. The flaws in Otter Tail's RTC model relate primarily to certain train assumptions that result in an understatement of the number of trains operating on the OTRR during the modeled period. It is possible that correction of these flaws would suggest the need for greater capacity, but BNSF nevertheless accepts Otter Tail's mainline capacity assessment for purposes of this Reply to Otter Tail's Supplemental Evidence. Otter Tail's track miles now exceed the track miles that BNSF sponsored in its March 1, 2005 Supplemental Evidence, so BNSF has determined that there is no reason to further complicate these proceedings with yet another RTC analysis.¹

However, as explained below, even if Otter Tail's RTC analysis can be used to assess OTRR mainline capacity, it should not be used to assess yard capacity.

3. Yards

BNSF and Otter Tail agree on the yard tracks and other facilities at all but three of the OTRR's yards -- Converse, Donkey Creek, and Glendive. The differences at these yards result from the differences between the parties with respect to the functions that must be performed at each yard and the amount of time that trains must remain in the yard (i.e., dwell time) for performance of these functions. BNSF previously demonstrated that Otter Tail's witnesses

¹ As noted below in Sections III.C and III.D, the faster transit times that BNSF also accepts result in lower operating costs. These trade-offs between capacity-related costs and operating costs are not uncommon in the real world.

understated the times that would be required to service OTRR trains and therefore understated both the yard dwell times for OTRR trains and the capacity needed in the yards to accommodate the longer dwell times. BNSF also identified the proper yard dwell times and the proper yard capacity needed to carry out all required yard activities. *See* BNSF Reply Nar. at III.B-37 to 50, and III.C-28 to 46; BNSF Supp. Reply Nar. at III.B-12 to 14 and BNSF Supp. Evidence Nar. at III.B-10 to 15; BNSF Supp. Evidence Exhibit III.B-2, pp. 2 (sheet 2 of 2), 4 (sheet 2 of 2) and 16 (sheet 2 of 2).

Otter Tail has presented no reason for BNSF to modify its assumptions as to the yard capacity for these three yards or the dwell time in these yards. Each party's evidence on yards is based on the opinion of its experts as to the operations that are required in the yard and the time required for those operations. Moreover, each party has presented an RTC analysis showing that its respective yard capacity assumptions are appropriate *for the tasks that each party assumes will be carried out at the yards*. If the Board determines that BNSF's evidence is the best evidence as to functions that must be carried out in OTRR yards, then the Board should accept BNSF's yard capacity and dwell time evidence.²

BNSF's acceptance of Otter Tail's mainline track miles and transit time assumptions does not compel acceptance of Otter Tail's yard capacity and dwell time assumptions. The two sets of assumptions can be assessed independently in this case. Otter Tail's RTC analysis of OTRR mainline operations assumes largely unimpeded entry and exit of OTRR trains to the yards. In other words, it assumes that the yards as posited by Otter Tail have adequate capacity. BNSF's yards are larger than Otter Tail's, so mainline transit times would not be expected to change if

² Set-out tracks are included in BNSF's yard track calculations for costing purposes. BNSF did not change its methodology for calculating set-out track miles, but it modified its calculations to account for the increase in failed equipment detectors on the additional double track.

BNSF's yards are substituted for Otter Tail's yards. Specifically, mainline transit times would not decrease because they are already based on an assumption that trains enter the yards unimpeded; nor would mainline times increase due to congestion on the mainlines because BNSF's yards are large enough to permit unimpeded entry.

Therefore, for purposes of this Reply to Otter Tail's Supplemental Evidence, BNSF continues to use the yard track assumptions that it presented in the March 1, 2005 Supplemental Evidence as well as the corresponding yard dwell times.

4. Summary of Capacity Assumptions

The parties' assumptions about the track capacity of the OTRR for purposes of this Reply to Otter Tail's Supplemental Evidence are set out below in Table III.B-1.

TABLE III.B-1

	BNSF's Reply to Supplemental Evidence	OTP Supplemental Evidence Errata
Route Miles	1,207.68	1,207.68 ³
Mainline Track	1,485.00 ⁴	1,485.00 ⁵
Yard Track	91.22 ⁶	66.72 ⁷
Set-Out Track Miles	23.03	11.14 ⁷

³ OTP Supp. Evidence Errata Nar. at III-B-2, Table III-B-6.

⁴ BNSF separately listed mine spur track miles in its Supplemental Evidence. *See* BNSF Supp. Evidence Nar. at III.B-9. Otter Tail includes mine spur track miles in its mainline track miles. Since BNSF has accepted Otter Tail's mainline track miles for purposes of this Reply to Otter Tail's Supplemental Evidence, BNSF also includes mine spur track miles in its mainline track miles.

⁵ OTP Supp. Evidence Errata Nar. at III-B-2, Table III-B-6.

⁶ BNSF Supp. Evidence Nar. at III.B-9, Table III.B-3.

⁷ OTP Supp. Evidence Errata Nar. at III-B-4, Table III-B-7.

III.C: Operating Plan

C. OPERATING PLAN

1. General Parameters

As discussed below in Section III.C.2, BNSF accepts for purposes of this Reply to Otter Tail's Supplemental Evidence Otter Tail's RTC-based assessment of the mainline transit times for OTRR trains as contained in Otter Tail's March 14, 2005 Errata. Therefore, BNSF accepts the basic operating assumptions underlying Otter Tail's RTC model analysis for purposes of assessing mainline transit times. As discussed below in Section III.C.3, BNSF does not accept the methodology used by Otter Tail to produce annual operating statistics from the transit times generated by its RTC model analysis.

In addition, BNSF does not accept Otter Tail's assumptions relating to operations in OTRR yards for reasons explained in Section III.B.3, above. Therefore, BNSF continues to use 40 switch crew personnel in this Reply to Otter Tail's Supplemental Evidence and 8 SD-40-2 locomotives required for switching operations. *See* BNSF Supp. Evidence Nar. at III.C-2.

As to helper requirements, the parties have previously agreed on the helper districts and numbers of helper locomotives for the OTRR, with one exception. BNSF added helper service between Glendive and Fryburg for the reasons explained in its Reply Evidence. BNSF Reply Nar. at III.C-15 to 17. Otter Tail did not provide helper service at this location in its Supplemental Evidence, or in any of the earlier rounds of evidence it has filed in this proceeding. For purposes of this Reply to Otter Tail's Supplemental Evidence, BNSF accepts Otter Tail's assumption that the OTRR could operate between Glendive and Fryburg without helpers. BNSF has accepted the mainline transit times generated by Otter Tail's run of the RTC Model in this Reply. Those transit times, however, assume that no helper is used on the Glendive-Fryburg segment. Using helpers on that segment would affect transit times and undermine the validity of the RTC-based transit times. Therefore, BNSF eliminates for purposes of this Reply three

SD70MAC locomotives that it previously included for the Glendive-Fryburg helper district. Eliminating this helper service reduces the total number of helper locomotives for the OTRR from 14 SD70MACs in BNSF's Supplemental Evidence to 11 SD70MACs, the same number of helper locomotives provided by Otter Tail. BNSF also eliminated the 24 employees it added as crew for the Glendive-Fryburg helpers, reducing its total helper crew personnel to 56.¹

2. Cycle Time

The assessment of cycle times for SARR trains is the foundation for the development of the equipment (locomotives and cars) requirements of the SARR. Equipment ownership costs of the SARR are generally based on the amount of time that the equipment is on SARR lines. The assessment of cycle times allows the parties to determine on-SARR time. The cycle time for a SARR train generally consists of three elements: transit times on the mainline, dwell times in SARR yards, and loading time at the mines. (Since Otter Tail's traffic group consists almost entirely of cross-over traffic, unloading time is not relevant except for the issue traffic.) The parties have agreed in this case to the amount of loading time required at the mines.

BNSF did not previously agree with Otter Tail's assessment of the mainline transit times since Otter Tail's prior evidence calculated mainline transit times based on its flawed string program analysis. However, Otter Tail has presented Supplemental Evidence based on the RTC analysis, and BNSF has accepted Otter Tail's RTC analysis for purposes of determining the OTRR's mainline capacity. Since capacity and transit times are interdependent, BNSF also accepts Otter Tail's mainline transit time assumptions for purposes of this Reply to Otter Tail's Supplemental Evidence. As demonstrated in BNSF Reply to Supp. Exhibit III.C-1, the transit times produced by Otter Tail's RTC analysis are faster on several OTRR segments than those

¹ BNSF Reply to Supp. Evidence electronic workpaper "helper switch and work summary-supEvid-Reply.xls."

posited by BNSF in its March 1, 2005 Supplemental Evidence. For this reason, BNSF's assessment of OTRR equipment requirements has decreased, as explained further in Section III.C.3.²

As to the yard dwell time component of cycle times, BNSF explained above in Section III.B.3 that Otter Tail has understated the time that OTRR trains would spend in yards. Therefore, BNSF does not accept Otter Tail's yard dwell time assumptions. Rejection of Otter Tail's yard dwell time assumptions does not preclude the Board from using Otter Tail's mainline transit time assumptions. Otter Tail's yard dwell times are based on inputs to the RTC model as determined by the parties' operating cost experts rather than an independent assessment by the RTC model of the amount of time that OTRR trains must dwell in yards. Thus, Otter Tail's yard dwell time assumptions are basically independent of the RTC-based mainline transit times assumptions.³ Acceptance of the RTC mainline transit times does not require acceptance of Otter Tail's yard dwell time assumptions.

² The electronic workpapers submitted with BNSF's Reply Evidence included a tutorial that explained how to derive transit times from the information generated by BNSF's run of the RTC model. BNSF Reply electronic workpapers "RTC & Report Wizard Exhibit Part 2.ppt" and "RTC & Report Wizard Exhibit Part 3.ppt." Specifically, the tutorial demonstrated how to use station files for each zone to derive the transit times. The same methodology can be applied to derive transit times from the information generated by Otter Tail's run of the RTC model in its Supplemental Evidence. In this case, however, transit times are calculated from Otter Tail Supp. Evidence electronic workpaper "ALTERNATIVE CASE (ERRATA).ROUTE" using station files for each of the four zones identified in BNSF Reply to Supp. Evidence electronic workpaper "Ottetail RTC Transit time zones.ppt." Station files and the report program are in BNSF Reply to Supp. Evidence electronic workpaper "Transit time report program-stations-train categories.zip."

³ Examination of the RTC animation shows that OTRR trains have basically unimpeded entry and exit from yards. In other words, the RTC model assumes that yard capacity is adequate and is not increasing mainline transit times. Thus, substituting BNSF's larger yards and longer dwell times for Otter Tail's should not have a significant impact, if any, on transit times.

3. Equipment Requirements

a. Locomotives

While BNSF accepts the mainline transit times produced by Otter Tail's RTC model, BNSF does not accept Otter Tail's calculation of operating statistics and equipment requirements that are based on the RTC output. Otter Tail's derivation of operating statistics and costs (including equipment requirements) using the RTC output is fundamentally flawed. Otter Tail uses a convoluted methodology that extrapolates from the operations of the specific set of trains assumed to be operating during the modeled week to produce annualized operating statistics. Otter Tail then purports to produce "non-peak" data using a methodology that is complicated, unreliable and unnecessary. Reliable operating statistics for an entire year can be calculated directly based on the trains assumed to operate in the year without relying on extrapolations from the particular trains operating during the modeled week.

Otter Tail's basic methodology for determining locomotive requirements is as follows: For each train that runs on the OTRR during Otter Tail's seven-day "peak" week, Otter Tail lets the RTC model determine the amount of time that the train is on the OTRR. Otter Tail then multiplies those train-hours by the number of locomotives (either three or four) on the train to calculate the total number of locomotive hours for each train supposed to be operating during the modeled week. Otter Tail then sums up the locomotive hours for all trains during the seven-day "peak" week and annualizes this "peak" week number by multiplying it by 365 and dividing by 7. However, the annual hours produced in this manner do not reflect the actual hours in the peak

year, 2021, because they are based on the supposed “peak” week used in the RTC model.⁴ This leads Otter Tail to try to “de-peak” the annualized hours by reducing the annualized peak year hours by the ratio of a fictional peak year *volume* (peak week volume annualized) to the actual *volume* of traffic moved in the year 2002.⁵ This approach results in base year statistics that are totally unreliable.

There is no reason to go through this convoluted process to develop the operating statistics for either the peak year or the base year. The total number of trains operating between each origin/destination pair in each year, including the peak year, is known, and the number of locomotives on each of those trains is also known. There is no need to rely on an extrapolation from the modeled week. Instead, the cycle time for each train can be determined using the transit times that the RTC identifies for movements between specific points on the OTRR, to which the mine and yard dwell times are added. With these cycle time calculations, the total locomotive hours can be determined for the entire OTRR traffic group for the entire year by simply counting up the cycle times (times the number of locomotives) for each train. There is no

⁴ As explained below, Otter Tail’s chosen week does not in fact represent peak period operations on the OTRR. As discussed further below in Section III.D.3 in the discussion of road crews, Otter Tail’s “peak” week may involve operations that are somewhat above average on the short north-south lines in the PRB but the OTRR operations on the more extensive east-west lines during the modeled week are far *below* average. Moreover, as demonstrated in BNSF Reply to Supp. Evidence electronic workpaper “OTP peak week analysis.xls,” there are 43 other 7-day periods in the year that involve higher traffic volumes than the week chosen by Otter Tail. Therefore, the premise for Otter Tail’s “de-peaking” methodology -- that the modeled week represents peak-period operations -- is unfounded.

⁵ Otter Tail Supp. Evidence Errata electronic workpaper “Service Units_XGF.xls.” To determine the number of coal locomotives required in the base year, Otter Tail then divides its base year locomotive hours by 8,760 hours per locomotive, and increases this number of locomotives by a peaking factor and a spare margin. BNSF addressed the defects with each of these elements of Otter Tail’s locomotive requirements calculation in BNSF’s October 8, 2003 Reply Evidence. BNSF is not addressing those issues in this Reply to Otter Tail’s Supplemental Evidence. BNSF Reply Nar. at III.C-64 to 66.

need for any extrapolations or complex “de-peakings” formulae. The number produced in this way is completely verifiable and accurate. This is the methodology that BNSF used.⁶

Apart from the complexity of Otter Tail’s methodology, there are numerous distortions in Otter Tail’s calculations that result from extrapolating from the specific trains assumed to be operating during the modeled week. Most important, if Otter Tail assumes that an incorrect number of trains run during the modeled week, or if it assumes an incorrect or unrepresentative mix of train types during the modeled week, then the total locomotive hours generated for the one week period will be incorrect and the errors will be amplified when the one week’s statistics are annualized. As discussed below, BNSF found numerous errors in Otter Tail’s train assumptions for the modeled week that resulted in an understatement of the trains operating during that week. Since Otter Tail’s methodology extrapolates from the trains operating during the modeled week to produce annualized statistics, these train errors produce large distortions in Otter Tail’s operating statistics.⁷

The first error is a result of Otter Tail’s rerouting of a number of the trains assumed to operate during the modeled week. The most significant reroutes occurred on several movements to Superior Dock. In the real world, BNSF moves Superior Dock trains over its Glendive route and over a route through Alliance and Lincoln, NB. Otter Tail rerouted a number of loaded trains that use BNSF’s Lincoln, NB, route in the real world to Otter Tail’s route through

⁶ BNSF Reply to Supp. Evidence electronic workpaper “LUMs and Carmiles (OTP-BNSF) (Supp Evidence Reply).xls,” worksheet “2002 SUMMARY.”

⁷ These flaws in the train group might also affect average transit times produced by the RTC model for movements between specific points on the OTRR, but the impact is not likely to be substantial. Moreover, correction of the flaws would add trains to the modeled operations, and therefore any changes resulting from the correction of the flaws would tend to produce somewhat slower transit times. For the sake of bringing this case to a close, BNSF is willing to accept Otter Tail’s transit time assumptions based on the RTC even though those transit times likely understate the transit times that could actually be expected.

Glendive.⁸ This allowed Otter Tail to assume for the OTRR a larger portion of the revenue available from these trains than if it had assumed that the trains take the real-world route through Alliance. The real-world movement would have provided the OTRR with only the revenues associated with the short-haul movement from the mines to an interchange with the residual BNSF at Donkey Creek or Converse.

However, having assumed that the OTRR would move these loaded trains over the longer route through Glendive (in order to take a larger percentage of the available revenue), it was erroneous for Otter Tail to assume that those rerouted trains, when empty, returned to the mines over the real-world route of movement. Otter Tail assumed that the OTRR would receive these trains from the residual BNSF at Converse or Donkey Creek. In other words, Otter Tail assumed that the OTRR would obtain the revenues attributable to the longer loaded portion of the movement but that the residual BNSF would do all the work to return the empty trains to the PRB. Otter Tail cannot have it both ways. It cannot get revenues based on an assumption that the OTRR handles the rerouted trains over a long-haul route but then avoid the costs of returning the empty trains over that same route. By ignoring the long haul on these empty trains, Otter Tail artificially reduced the locomotive hours associated with those empty trains and understated the statistics used to produce its operating costs and equipment requirements.

Second, since Otter Tail calculates operating statistics based on the trains assumed to run during the modeled week, Otter Tail's calculations are extremely sensitive to its assumptions about the specific trains assumed to operate during the modeled week. This gives rise to two problems. First, Otter Tail's operating statistics will turn on the mix of long-haul and short-haul trains that operate during the modeled week. The more short-haul trains assumed to operate

⁸ BNSF Reply to Supp. Evidence electronic workpaper "misroute empties.xls."

during the modeled week relative to long-haul trains, the lower the operating statistics that will result using Otter Tail's approach. (Short-haul trains generate fewer on-SARR locomotive hours, and therefore produce lower apparent locomotive requirements.) This is a major concern in this case since Otter Tail selected its supposed peak week based on the number of loaded trains dispatched from PRB mines rather than the volume of traffic moving over the OTRR lines used by the long-haul traffic. Since most of the OTRR's loaded coal trains leave the OTRR at Converse or Donkey Creek with only a short haul on the OTRR, there is a substantial reason to believe that Otter Tail's peak week is weighted toward short-haul trains, thus distorting the operating statistics.

In addition, the train list used for the modeled week is subject to manipulation. Indeed, Otter Tail's train list changed substantially between its March 1, 2005 Supplemental Evidence and its March 14, 2005 Errata. Several empty trains in the March 1, 2005 train list disappear from the March 14, 2005 train list and several loaded trains appear for the first time.⁹ The new set of trains produce substantially different operating statistics based on the relative mix of long-haul and short-haul trains in the two train lists. The ability to produce different operating statistics for the OTRR merely by changing the mix of trains assumed to operate during the modeled week introduces substantial uncertainty and unreliability into Otter Tail's calculations.

Finally, the formulae used by Otter Tail to produce annualized, "de-peaked" statistics for the base year produces distorted and unreliable results. BNSF addressed this issue in its Reply Evidence. BNSF Reply Nar. at III.C-58 to 60. As BNSF explained in its Reply Evidence, the ratio Otter Tail used to go from the 2021 locomotive hours (which were based on annualizing the "peak day" locomotive hours) to its 2002 locomotive hours was based on the ratio of the volume

⁹ BNSF Reply to Supp. Evidence electronic workpaper "summary analysis of OTP week trains and stats.xls."

of traffic that would be carried by the OTRR (based on annualizing the peak day movements in 2021) to the actual volume of traffic that moved in the year 2002. *Id.* As BNSF illustrated by reference to non-coal locomotives, the use of this apples-and-oranges comparison of annualized *hours* to annualized *volumes* produced the absurd result that the OTRR would require 71 percent as many non-coal locomotives in 2002 as in 2021, *even though the non-coal traffic remained constant over the 20-year DCF period.* Otter Tail's Supplemental Evidence is based on annualizing a week's worth of locomotive hours, instead of annualizing a day's worth of hours, but the same distortions result from its use of a ratio based on volumes to produce assumptions about base-year hours.¹⁰

There is simply no need to go through the convoluted methodology used by Otter Tail to calculate annual locomotive hours. It is simpler and more accurate to determine the time that each train is on the OTRR by using the average transit times indicated by the RTC model, multiply that time by the number of locomotives on the train to determine the locomotive hours for the train, and add the locomotive hours for all of the trains during the peak year to determine total locomotive hours for the entire peak year. Using this methodology (and applying the peaking factor and spare margin developed by BNSF in its Reply Evidence), BNSF determined that the OTRR will require a total of 200 SD-70 MAC locomotives as coal locomotives, and 22

¹⁰ The distortions probably are a result of the same problem identified above relating to the mix of traffic during the modeled period. For example, if the modeled week is heavily weighted toward short-haul movements, the operating statistics (e.g., locomotive hours) will be low for the modeled week relative to other weeks that have high long-haul traffic volumes. (Many trains will be moving only short distances on the OTRR in Otter Tail's peak week.) However, the annualized *volume* of traffic based on the modeled week will be quite high because the volume calculations ignore length of haul, resulting in a very large and unwarranted reduction ratio.

C44-9 locomotives for general freight.¹¹ Table III.C-1 below compares the coal locomotive requirement calculated by BNSF and Otter Tail.

**TABLE III.C-1
COMPARISON OF OTRR LOCOMOTIVE REQUIREMENTS**

	Otter Tail Supp. Evidence Errata (RTC Alternative Case - Exclusions)¹²	BNSF Reply to Supp. Evidence¹³
Type of Locomotive		
SD70MAC		
Road Locomotives	139	200
Helpers	11	11
C44-9	15	22
SD40-2	4	12

b. Railcars

In the Errata to its Supplemental Evidence, Otter Tail assumes that the OTRR will provide 708 coal railcars for its “Alternative Case-Exclusions.” Otter Tail’s calculation of railcars is based on the same methodology described above with respect to locomotives. As with its locomotive count, Otter Tail determines the amount of time that cars in each of the trains assumed to operate during its seven-day “peak week” spent on the OTRR, and then annualizes its “peak week” car hours to determine a fictionalized number of car hours during the peak year,

¹¹ BNSF acknowledges that the Board applied a modified approach to assessing the SARR’s peak locomotive requirements in the *Xcel* case. That issue is outside the scope of this Supplemental Evidence. However, the Board can easily apply different peaking assumptions while using BNSF’s base locomotive calculations if it believes that a modified approach to determining peak equipment requirements is warranted in this case.

¹² OTP Supp. Evidence Errata Nar. III-C-10, Table III-C-6.

¹³ BNSF Reply to Supp. Evidence electronic workpapers “LUMs and Carmiles (OTP-BNSF) (Supp Evidence Reply).xls,” worksheet “2002 SUMMARY,” and “helper switch and work summary-supEvid-Reply.xls.”

2021. Otter Tail then seeks to “de-peak” the 2021 hours to base year 2002 hours on the basis of the ratio of the 2021 volume of coal traffic (annualized from the modeled week) to the actual volume of traffic that moved in 2002.¹⁴ This methodology suffers from the same deficiencies discussed above with respect to Otter Tail’s methodology for calculating the OTRR’s locomotive requirements. There is no need to repeat BNSF’s discussion of those flaws.¹⁵

There is one additional flaw with Otter Tail’s calculation of coal railcar requirements that renders Otter Tail’s car count unusable. As BNSF pointed out in its Reply Evidence, Otter Tail incorrectly identified the percentage of total coal railcars on the OTRR that are the responsibility of the OTRR. BNSF Reply Nar. at III.C-71 to 73. Otter Tail relied only on the private car designation on BNSF’s traffic tapes to identify car ownership and it failed to account for the fact that BNSF leases or is otherwise responsible for a large number of private cars. Accordingly, the fact that private cars are identified on BNSF’s traffic tapes does not establish who is responsible for car ownership costs. The OTRR would be responsible for the same private cars that BNSF is required to lease. BNSF performed a special study in its Reply Evidence to properly identify the railroad-owned coal railcars that would be the responsibility of the OTRR. *Id.* Otter Tail ignored the results of that study.

For purposes of this Reply to Otter Tail’s Supplemental Evidence, BNSF has used Otter Tail’s mainline transit times to calculate cycle times for OTRR cars. As with locomotives,

¹⁴ As with its locomotive calculations, Otter Tail divides its base year car hours by 8,760 hours, and adds a peaking factor and spare margin to calculate the number of coal railcars OTRR is required to provide. Otter Tail Supp. Evidence Errata electronic workpaper “Service Units_XGF.xls,” or “Service Units_XGF.123.”

¹⁵ It is worth noting that the distortion resulting from Otter Tail’s rerouting of certain empty coal trains does not have as pronounced an effect on the determination of coal railcar requirements as it does on the determination of locomotive requirements because the coal railcars on most of the affected trains are owned by the shippers, not OTRR.

BNSF used the cycle time data to calculate the OTRR's coal railcar requirements based on a direct evaluation of the specific cars used in each train operated during the peak year and the time those cars would be on the OTRR network. These calculations do not rely on extrapolations or assumptions about the trains operating during the modeled week, so they do not have any of the flaws associated with Otter Tail's methodology.¹⁶ Table III.C-2 compares the number of railcars for the OTRR calculated by Otter Tail and by BNSF.

TABLE III.C-2
Comparison Of Coal Railcar Requirements For OTRR

	Otter Tail Supp. Evidence Errata (RTC Alternative Case - Exclusions) ¹⁷	BNSF Reply to Supp. Evidence ¹⁸
Coal Railcars	708	1882

¹⁶ BNSF Reply to Supp. Evidence electronic workpaper "LUMs and Carmiles (OTP-BNSF) (Supp Evidence Reply).xls."

¹⁷ Otter Tail Supp. Evidence Errata electronic workpaper "Service Units_XGF.xls," at TAB "IIIC."

¹⁸ BNSF Reply to Supp. Evidence electronic workpaper "Railcar Costs supplemental-supEvid-Reply.xls," at TAB "SUMMARY Coal."

III.D: Operating Costs

D. OPERATING EXPENSES

1. Locomotives

The number of locomotives that BNSF has determined for purposes of this Reply to Otter Tail's Supplemental Evidence based upon the revised cycle times was discussed above in Section III.C.3.a. Locomotive expenses for these locomotives are addressed below.

a. Leasing

BNSF's development of annual lease costs for each locomotive type is addressed in Section III.D.1.a of its October 8, 2003, Reply Evidence. BNSF has not changed the unit lease costs used to assess locomotive ownership costs. BNSF applied these unit costs to the revised number of locomotives to calculate total locomotive lease costs for the OTRR.¹ Table III.D.1-1 compares the parties' respective 2002 locomotive lease costs for the OTTR.

¹ See BNSF Reply to Supp. Evidence electronic workpaper "OPR_EXP_supEvid-Reply.xls."

number of locomotives on each train operating during the year and multiplying by the number of miles for each movement.

BNSF has restated LUMs for purposes of this Reply to account for the slightly different route and track miles that result from BNSF's acceptance of Otter Tail's evidence on this point. Using these restated LUMs and the revised locomotive count, BNSF also recalculated locomotive maintenance costs. No other changes were made.⁴ Table III.D.1-2 compares Otter Tail's and BNSF's costs for locomotive maintenance.

⁴ See BNSF Reply to Supp. Evidence electronic workpaper "Revised Locomaint_Otter Tail_supplemental-supEvid-Reply.xls," sheet "Summary."

**Table III.D.1-2
Comparison of Locomotive Maintenance Costs – 2002**

	OTRR Supp. Evidence Errata⁵	BNSF Reply to Supp. Evidence⁶	Difference
SD70MACs			
1. Locomotive Unit-Miles	19,317,376	20,133,420	-816,044
2. Cost/LUM	{ }	{ }	{ }
3. Annual Maintenance	{ }	{ }	{ }
4. Annual Overhaul Charge/Unit	{ }	{ }	{ }
5. Total Number of Units	150	211	-61
6. Total Overhauls	{ }	{ }	{ }
C44-9s			
7. Locomotive Unit-Miles	3,181,247	3,569,074	-387,827
8. Cost/LUM	{ }	{ }	{ }
9. Annual Maintenance	{ }	{ }	{ }
10. Annual Overhaul Charge/Unit	{ }	{ }	{ }
11. Total Number of Units	15	22	-7
12. Total Overhauls	{ }	{ }	{ }
SD40-2s			
13. Locomotive Unit-Miles	210,240	483,120	-272,880
14. Cost/LUM	{ }	{ }	{ }
15. Annual Maintenance	{ }	{ }	{ }
16. Annual Overhaul Charge/Unit	{ }	{ }	{ }
17. Total Number of Units	4	12	-8
18. Total Overhauls	{ }	{ }	{ }
19. Total Annual Maintenance	{ }	{ }	{ }

⁵ Otter Tail Supp. Evidence Errata electronic workpapers "LOCOMAINT_OTTER TAIL_REB_XGF.123," and "Otter Tail_OPR_EXP_REB_ALT_XGF.123," sheet "Summary."

⁶ See BNSF Reply to Supp. Evidence electronic workpaper "Revised Locomaint_Otter Tail_supplemental-supEvid-Reply.xls" sheet "Summary." The unit costs presented in this table are the effective costs per LUM. BNSF's unit costs per LUM did not change from BNSF's March 1, 2005 Supplemental Evidence.

c. Locomotive Servicing

Locomotive service costs are a function of LUMs. Accordingly, BNSF has revised these calculations only to account for the slight change in LUMs resulting from acceptance of Otter Tail's route and track miles.⁷

d. Fuel

Similarly, fuel costs are a function of LUMs. BNSF has therefore revised the fuel calculations only to account for the slight change in LUMs resulting from acceptance of Otter Tail's route and track miles.⁸ Table III.D.1-3 compares Otter Tail's and BNSF's fuel costs.

⁷ See BNSF Reply to Supp. Evidence electronic workpapers "OPR_EXP_supEvid-Reply.xls," and "Revised Locomaint_Otter Tail_supplemental-supEvid-Reply.xls," worksheet "Summary."

⁸ See BNSF Reply to Supp. Evidence electronic workpaper "Otter Tail Fuel Corrected_supplemental-supEvid-Reply.xls."

**Table III.D.1-3
Comparison of OTRR Fuel Costs**

	Otter Tail Supp. Evidence Errata⁹	BNSF Reply to Supp. Evidence¹⁰	Difference
SD70MACs			
1. Locomotive Unit Miles	19,107,120	20,133,420	-1,026,300
2. Gallons/Locomotive Unit Mile	3.42	3.60	-.18
3. Total Gallons	65,270,261	72,426,787	-7,156,526
4. Price/Gallon	\$0.7348	\$0.7243	\$.0105
C44-9s			
6. Locomotive Unit Miles	3,181,244	3,569,074	-387,830
7. Gallons/Locomotive Unit Mile	\$2.90	2.92	-\$0.02
8. Total Gallons	9,266,311	10,421,087	-1,154,776
9. Price/Gallon	\$0.7348	\$0.7243	\$.0105
SD40-2s			
11. Locomotive Unit Miles	210,240	483,120	-272,880
12. Gallons/Locomotive Unit Mile	3.16	3.26	-.10
13. Total Gallons	663,928	1,574,288	-910,360
14. Price/Gallon	\$0.7348	\$0.7243	\$.0105
Total Fuel Costs	\$54,226,015	\$61,149,237	-\$6,923,222

e. Other

This section intentionally left blank.

2. Railcars

a. Leasing And Maintenance

Railcar leasing and maintenance costs are based on the number of railcars assumed to be the responsibility of the OTRR and the number of car-miles. BNSF has explained above in Section III.C.3.b. that Otter Tail's calculation of the OTRR's coal railcar requirements is flawed, and BNSF restated the OTRR's railcar requirements.

⁹ Otter Tail Supp. Evidence Errata electronic workpaper "Otter Tail_OPR_EXP_REB_ALT_XGF.123" sheet "Summary."

¹⁰ See BNSF Reply to Supp. Evidence electronic workpaper "Otter Tail Fuel Corrected_supplemental-supEvid-Reply.xls."

Otter Tail's assessment of car-miles is flawed for the same reason that its calculation of LUMs is flawed. BNSF has also restated car-miles for purposes of this Reply to account for BNSF's acceptance of Otter Tail's route and track mile assumptions.¹¹ Accordingly, BNSF has revised its calculation of railcar leasing and maintenance costs for the OTRR only to account for this slight change in car miles.¹² Table III.D.2-1 compares Otter Tail's and BNSF's railcar leasing and maintenance costs for the OTRR.

¹¹ In its Reply Evidence, BNSF addressed other problems with Otter Tail's calculation of railcar leasing and maintenance costs. BNSF Reply Nar. at III.D-20 to 26. BNSF does not address those issues here.

¹² See BNSF Reply to Supp. Evidence electronic workpaper "Railcar Costs_supplemental-supEvid-Reply.xls."

**Table III.D.2-1
Comparison of Railcar Lease and Maintenance Costs**

	Otter Tail Supp. Evidence Errata¹³	BNSF Reply to Supp. Evidence¹⁴	Difference
Car Type			
Coal			
Count of Gondolas	546	1,578	-1,032
Annual Cost per Gondola	{ }	{ }	{ }
Cost of Gondolas	{ }	{ }	{ }
Count of Open Top Hoppers	163	304	-141
Annual Cost per Hopper	{ }	{ }	{ }
Cost of Hoppers	{ }	{ }	{ }
Total Coal Cars	{ }	{ }	{ }
General Freight			
A – Equipped Box	{ }	{ }	{ }
B – Unequipped Box	{ }	{ }	{ }
C – Covered Hopper	{ }	{ }	{ }
E – Equipped Gondola	{ }	{ }	{ }
F – Flat	{ }	{ }	{ }
G – Unequipped Gondola	{ }	{ }	{ }
H – Unequipped Open Hopper	{ }	{ }	{ }
J – Gondola	{ }	{ }	{ }
K – Equipped Hopper	{ }	{ }	{ }
L – Specialty	{ }	{ }	{ }
P – Conventional Intermodal	{ }	{ }	{ }
Q – Lighter Weight, Low Profile	{ }	{ }	{ }
R – Refrigerator	{ }	{ }	{ }
S – Stack Car	{ }	{ }	{ }
T – Tank	{ }	{ }	{ }
U – Containers	{ }	{ }	{ }
V – Vehicular Flat	{ }	{ }	{ }
Z – Trailers	{ }	{ }	{ }
Total Railcar Costs	{ }	{ }	{ }

¹³ Otter Tail Supp. Evidence Errata electronic workpaper “OTRR CAR COSTS_REB_ALT_XGF.123.”

¹⁴ See BNSF Reply to Supp. Evidence electronic workpaper “Railcar Costs_supplemental-supEvid-Reply.xls.”

b. Private Car Allowance

BNSF's treatment of private car allowances does not change as a result of BNSF's acceptance of the transit times from Otter Tail's RTC Model run or as a result of BNSF's acceptance of Otter Tail's route and track miles.

c. Other

This section intentionally left blank.

3. Personnel

a. Operating Personnel

(1) Staffing Requirements

Otter Tail's crew calculations provide clear evidence of the unreliability of Otter Tail's methodology for using the RTC output to produce operating statistics and the risk that operating statistics developed using Otter Tail's methodology will be affected by the mix of trains that operate during the modeled week.

Otter Tail's approach to developing crew requirements for the OTRR is basically the same as its approach for determining locomotive hours and car hours. Otter Tail first identified the number of road crews that would be required to operate the specific OTRR trains assumed to operate during the modeled week. It then annualized those crew requirements and "de-peaked" the resulting number using the ratio of annualized volume (from the modeled week) to actual base year volume.¹⁵

The first indication that this methodology is flawed is that the crew count changed substantially between Otter Tail's March 1, 2005 Supplemental Evidence and its March 14, 2005 Errata. The Errata filing was supposed to address changes in the RTC model involving train operations. But the relatively small changes in train operations at issue in

¹⁵ Otter Tail Supp. Evidence electronic workpaper "Service Units_XGF.xls."

Otter Tail's Errata should not have affected crew requirements. Nevertheless, Otter Tail's purported crew requirements went from 430 road crews in the Supplemental Evidence (Alternative Case) to 407 road crews in the March 14, 2005 Errata, a difference of 5 percent.¹⁶

It appears that the cause of this significant reduction in road crews was a change in the trains assumed to be operating during the modeled week, not in the number of trains required during the year. As BNSF explained previously, one of the fundamental flaws in Otter Tail's methodology is that it is highly sensitive to the specific mix of trains assumed to be operating during the modeled week. If the trains operating in the chosen week are weighted toward short-haul trains, the apparent volume of traffic moving during that week (based on loadings) may make the week appear to be a "peak" week, but the operating statistics will not reflect a peak operating period. In fact, Otter Tail made several changes between its March 1, 2005 Supplemental Evidence and its March 14, 2005 Errata to the trains assumed to be operating in the modeled week that increased the number of short-haul trains at the expense of long-haul trains. Several long-haul trains were dropped from its train list and short-haul trains were added.¹⁷ Short-haul trains, of course, require far fewer crews than long-haul trains. Thus, Otter Tail shows a reduction in crew requirements between its March 1, 2005 and March 14, 2005 evidence because of a change in the mix of trains operating during the modeled week, even though there was no change in the traffic group that would justify such a change in the crew count.

¹⁶ Otter Tail Supp. Evidence electronic workpaper "Service_Units_XGF.123," and Otter Tail Supplemental Evidence Errata workpaper "Service_Units_XGF.123."

¹⁷ See BNSF Reply to Supp. Evidence electronic workpaper "summary analysis of OTP week trains and stats.xls."

The flaws in Otter Tail's methodology can also be seen by comparing the crew count that Otter Tail determined using its "peak" week annualized methodology to the crew count BNSF determined by simply adding up all of the trains that operate in the peak year, multiplied by the number of crew starts for each train. This latter number is completely verifiable and it is unaffected by any assumptions regarding the mix of trains that operate during the modeled week. (BNSF's crew starts are based on the traffic group that BNSF uses for the peak year, which is slightly smaller than Otter Tail's traffic group for that year because of different assumptions about coal traffic volume increases over time.) The comparison is set out in BNSF Reply to Supp. Exhibit III.D.3-1.

As shown in that exhibit, Otter Tail's assumed coal crew starts (using its extrapolation methodology) is somewhat higher than the actual number of crew starts in the peak year as calculated by BNSF (55,636 compared to 48,621). Part of the difference is attributable to the smaller coal traffic volumes that BNSF assumes for the peak year, and some of the difference may also be attributable to Otter Tail's use of a week for modeling purposes in which coal loadings were above average. However, Otter Tail's assumed *non-coal* crew starts is far lower than the actual non-coal crew starts (9,542 compared to 15,040). BNSF and Otter Tail agree on the volume of non-coal traffic. The comparison of Otter Tail's annualized non-coal crew numbers to the actual non-coal crews therefore demonstrates that the week Otter Tail chose to model is far *below* average in terms of non-coal traffic. Moreover, when Otter Tail applies its purported "de-peaking" methodology to its annualized 2021 non-coal crew assumptions, it reduces

by 18 percent the already understated non-coal crews.¹⁸ Most of the difference between the parties' crew calculations involve non-coal crews where Otter Tail's calculations are demonstrably inaccurate and understated.

For the reasons discussed previously, there is no reason at all to use a convoluted methodology to determine crew starts since the number of trains operating in the peak year is known and it is therefore possible simply to count up the crew starts that will be required for those trains. BNSF has applied this simple and verifiable methodology to determine the crew requirements for purposes of this Reply to Otter Tail's Supplemental Evidence.¹⁹ Table III.D.3-1 below compares Otter Tail's and BNSF's operating personnel staffing for the OTRR.

¹⁸ Otter Tail Supplemental Evidence Errata electronic workpaper "Service Units_XGF.xls," worksheet "Crew Calculations."

¹⁹ See BNSF Reply to Supp. Evidence electronic workpaper "LUMs and Carmiles (OTP-BNSF) (Supp Evidence Reply).xls." Because the crew starts are based directly on the number of trains operating in the year, BNSF's calculations do not assume any extra crews are available to deal with peak periods. Accordingly, there is no basis for any "holiday staffing" concern of the type expressed by the Board in the recent *Xcel* decision. *Xcel* at 65.

Table III.D.3-1
Comparison of Transportation Department Employee Count

	Position	Otter Tail Supp. Evidence Errata ²⁰	BNSF Reply to Supp. Evidence ²¹	Difference
1.	Vice President - Transportation	1	1	-
2.	Administrative Assistant	1	1	-
3.	Director - Safety Rules and Training	2	1	1
4.	Manager - Safety Rules and Training	4	2	2
5.	Director - Operations Control	1	1	-
6.	Manager - Operations Control	5	5	-
7.	Dispatchers	14	14	-
8.	Crew Management	10	10	-
9.	Director - Customer Service	1	1	-
10.	Manager - Customer Service	5	5	-
11.	Director - Train and Locomotive Operations	1	1	-
12.	Manager - Train and Locomotive Operations	6	6	-
13.	Assistant Manager - Train and Locomotive Operations	10	12	-2
14.	Yardmasters	-	15	-15
15.	Crew Haulers	-	36	-36
16.	Train Crew Personnel	485	548	-63
17.	Total Transportation Department Personnel	546	659	-113

(2) Compensation

BNSF has not changed its salary assumptions for operating personnel as set out in Section III.D.3.a(2) of its March 1, 2005 Supplemental Evidence. *See* BNSF Supp.

²⁰ OTP Supp. Evidence Errata electronic workpaper "OTTER TAIL_OPR_EXP_REB_ALT_XGF.123," sheet "Summary."

²¹ *See* BNSF Supp. Evidence Nar. at III.D-8, Table III.D.3-1, and BNSF Reply to Supp. Evidence electronic workpaper "OPR_EXP_supEvid-Reply.xls," sheet "Summary."

Evidence Nar. at III.D-9, Table III.D.3-2. BNSF recalculated the total compensation costs to account for the change in OTRR operating personnel.²²

(3) Materials, Supplies And Equipment

BNSF has not changed the unit cost of materials, equipment and supplies set forth in Section III.D.3.a.(3) of its March 1, 2005 Supplemental Evidence. *See* BNSF Supp. Evidence Nar. at III.D-10.²³ BNSF has recalculated the total cost of materials, equipment and supplies to account for changes in OTRR operating personnel.²⁴

b. Non-Operating Personnel

(1) Staffing Requirements

BNSF's acceptance of the transit times generated by Otter Tail's RTC model and Otter Tail's route and track mile assumptions does not affect BNSF's staffing of OTRR's non-operating personnel as set forth in Section III.D.3.b(1) of BNSF's March 1, 2005 Supplemental Evidence. *See* BNSF Supp. Evidence Nar. at III.D-10 to 12.

(2) Compensation

BNSF has not changed the per employee compensation costs for non-operating personnel for purposes of this Reply.²⁵

²² *See* BNSF Reply to Supp. Evidence electronic workpaper "OPR_EXP_supEvid-Reply.xls," worksheet "Summary."

²³ *See* BNSF Reply to Supp. Evidence electronic workpaper "OPR_EXP_supEvid-Reply.xls," worksheet "Summary."

²⁴ *See* BNSF Reply to Supp. Evidence electronic workpaper "OPR_EXP_supEvid-Reply.xls," worksheet "Summary."

²⁵ BNSF addressed compensation for non-operating personnel in Section III.D.3b(2) of its October 8, 2003 Reply Evidence and continued to rely on that evidence in its March 1, 2005 Supp. Evidence. *See* BNSF Reply Nar. at III.D-53 and BNSF Supp. Evidence Nar. at III.D-12.

(3) Materials, Supplies And Equipment

Materials, equipment and supplies for mechanical non-operating personnel are included in the consideration of materials, equipment and supplies for operating personnel in Section III.D.3.a.(3) above.

(4) Other

This section intentionally left blank.

c. General and Administrative Expense

BNSF's acceptance of the transit times generated by Otter Tail's RTC model and Otter Tail's route and track miles does not change any of the General and Administrative staffing levels, compensation or other costs as set out in Section III.D.3.c of BNSF's March 1, 2005 Supplemental Evidence. *See* BNSF Supp. Evidence Nar. at III.D-13 to 18.

d. Other — IT Requirements

No changes are needed to the IT costs set forth in Section III.D.3.d of BNSF's March 1, 2005 Supplemental Evidence. *See* BNSF Supp. Evidence at III.D-18.²⁶

4. Maintenance-of-Way

As discussed previously, BNSF has accepted Otter Tail's track configuration for purposes of this Reply to Otter Tail's Supplemental Evidence. Otter Tail's configuration includes nearly 80 more track miles, 52 more turnouts, and more bridges, culverts, crossings and signals than were included in BNSF's March 1, 2005 Supplemental Evidence. As BNSF explained in its prior evidence, MOW costs are directly linked to construction components (rail, OTM, ballast, bridges, turnouts, crossings, facilities, etc.).

²⁶ *See* BNSF Reply to Supp. Evidence electronic workpaper "OPR_EXP_supEvid-Reply.xls," sheet "Summary."

Therefore, BNSF's MOW witness Mr. Albin recalculated the MOW costs for the OTRR that result from the additional track capacity. To do so, Mr. Albin used the same formulae, standards and the unit costs that he relied upon in BNSF's October 8, 2003 Reply Evidence.

Specifically, Mr. Albin allowed the new track assumptions to flow through the existing MOW electronic spreadsheets without any changes to the underlying assumptions or formulae to determine increased contract costs, such as track geometry testing costs, which are a per track mile unit cost. Mr. Albin also increased the internal MOW personnel and equipment needs for MOW activities that are directly linked to signals because those changes are based on a formula that BNSF previously sponsored. Thus, he added two signal maintainers, one each at Glendive and Donkey Creek, to maintain the additional 2000 AAR units that result from the increase in track miles and turnouts on the modified OTRR. This increase in personnel is based on the standard used in BNSF's prior evidence of one signal maintainer for every 900 AAR units. BNSF Reply Nar. at III.D-168 to 169. Mr. Albin added the tools and equipment, including vehicles, that the two additional signals maintainers require to perform their responsibilities also based on assumptions previously used.²⁷ Mr. Albin's restatement of OTRR's contract, workforce and equipment needs is presented in BNSF Reply to Supp. Exhibit III.D.4-1.²⁸ The additional track facilities result in a slight increase of 0.47 percent from the MOW total operating expense estimate presented in BNSF's Supplemental Evidence.

²⁷ See BNSF.SUPPRP.WP.III.D.4-004.

²⁸ This exhibit includes the calculations necessary to allocate MOW costs for purposes of the cross-subsidy analysis.

5. Leased Facilities

This section intentionally left blank.

6. Loss and Damage

Loss and damage costs are based on revenues, which have not changed in this Reply. Therefore, BNSF does not change the loss and damage costs set forth in Section III.D.5 of BNSF's Supplemental Evidence. *See* BNSF Supp. Evidence Nar. at III.D-25.²⁹

7. Insurance

Insurance is calculated based on a percentage of total operating expenses. Since those expenses have changed slightly as a result of BNSF's acceptance of Otter Tail's transit times and route and track miles, BNSF has restated those expenses for purposes of this Reply.³⁰

8. Ad Valorem Taxes

BNSF's acceptance of Otter Tail's route and track miles requires a slight restatement of ad valorem taxes.³¹

9. Other

This section intentionally left blank.

²⁹ See BNSF Reply to Supp. Evidence electronic workpaper "OPR_EXP_supEvid-Reply.xls."

³⁰ See BNSF Reply to Supp. Evidence electronic workpaper "OPR_EXP_supEvid-Reply.xls."

³¹ See BNSF Reply to Supp. Evidence electronic workpaper "OPR_EXP_supEvid-Reply.xls."

III. E: Non-Road Property
Investment

E. NON-ROAD PROPERTY INVESTMENT

Any and all changes made to non-road property investment have been addressed in previous sections.

III.F: Road Property
Investment

F. ROAD PROPERTY INVESTMENT

As stated above in Section III.B, BNSF has accepted Otter Tail's mainline track mile (1,485) and route mile (1,207.68) calculations, but has retained its own assumptions with respect to yard track miles (114.25) and facilities. BNSF's Engineering Consultant Cassie Gouger therefore has restated the road property investment costs in this Reply to reflect 1,599.25 total track miles, which is an increase of 76.46 track miles from the track miles reflected in BNSF's March 1, 2005 Supplemental Evidence.

BNSF has not changed the methodology by which it assessed investment levels or determined the unit costs contained in its October 8, 2003 Reply Evidence and subsequent filings -- only the *quantities* of the various components of the OTRR have been adjusted to reflect the new route and track miles. These adjustments are discussed below. BNSF's adjusted total costs for road property investment are contained in BNSF's statement of total construction costs in electronic workpaper "III F OTRR Construction_Reply to Supp Evidence.xls" and BNSF Reply to Supp. Exh. III.F-1.

BNSF's total road property investment cost after taking the additional track miles into account is \$4.01 billion.

1. Land

BNSF has not made any adjustments to the total land costs. The total difference between Otter Tail's land costs in its March 14, 2005 Supplemental Reply Errata and BNSF's land costs in this Reply is shown in BNSF Reply to Supp. Exh. III.F-1.

2. Roadbed Preparation

BNSF has restated roadbed expenses to reflect the mainline track miles in Otter Tail's March 14, 2005 filing. BNSF electronic workpaper "IIIF2 OTRR GRADING_Reply to Supp Evidence.xls" contains the restatement of the total quantities and costs for roadbed preparation

(including clearing, grubbing, stripping, foundation conditioning, and undercutting), earthworks (including excavation and fine grading), and other small roadbed items (including rip rap, access roads, land for waste quantities, and detours).¹ A summary of the earthwork costs is included in BNSF Reply to Supp. Exh. III.F-2.

3. Track Construction

The necessary quantities of components such as ballast, subballast, ties, rail, welds, tie plates, clips, spikes, and anchors depend on the total number of track miles; thus, the addition of 76.46 miles of track has impacted the final quantities of these track materials. The additional track miles also affect the final count of turnouts, switch heaters, and rail lubricators as well as the costs associated with the transportation and installation of all track materials. BNSF's restated total cost for track materials, transportation, and installation is \$1.01 billion.

The adjusted quantities of OTRR track materials are developed in BNSF's electronic workpapers "III F track count_Reply to Supp Evidence.xls" and "III F OTRR Construction_Reply to Supp Evidence.xls" worksheet "Quantities." Electronic workpaper "III F OTRR Construction_Reply to Supp Evidence.xls" worksheet "Total Cost" states revised total construction costs.

4. Tunnels

There are no tunnels on the OTRR.

5. Bridges and Culverts

The additional track miles have resulted in an increase in bridge costs. The increases however, did not affect the design of any of the bridges, so only the quantities were changed for Bridge Types I, II and III. No changes were required for the Type II Special and Type III

¹ Culverts are discussed in Section III.F.5 Bridges consistent with the inclusion of bridges and culverts in the same account in the DCF.

Special bridges. Restated bridge costs are included in BNSF electronic workpaper "III F OTRR Construction_Reply to Supp Evidence.xls" worksheet "Bridge."

The additional track miles also caused changes in the quantity and cost of culverts. Restated culvert quantities are contained in electronic workpaper "III F OTRR Construction_Reply to Supp Evidence.xls." worksheet "Culvert List." The total increase in cost for culverts is included in "III F OTRR Construction_Reply to Supp Evidence.xls" worksheet "Total Cost" and in BNSF Reply to Supp. Exh. III.F-1.

6. Signals and Communications

The changes in route miles and track miles result in corresponding changes in signal and communications costs for the OTRR. BNSF accepted Otter Tail's 1,207.68 route miles, which is a decrease of 2.48 route miles from BNSF's March 1, 2005 Supplemental Evidence. This results in a decrease in CTC miles and thus CTC costs. However, because of the additional track miles for double tracking and the resulting additional turnouts in the Otter Tail configuration that BNSF has accepted, the quantity of electric locks has increased.

The increase in track miles also affects the communications costs. Although there are no changes in microwave or LMR towers, the total cost for the microwave systems must be increased to accommodate the additional control points on the added power turnouts and crossovers. The slight decrease in train crews also results in a decrease in requirements for radio communications.

The restated quantities for affected components of the OTRR signal and communications systems are included in BNSF's restatement of construction costs, contained in electronic workpaper "III F OTRR Construction_Reply to Supp Evidence.xls" worksheet "Total Cost."

7. Buildings and Facilities

Because BNSF has not made changes to its assumptions with respect to yard tracks and facilities, no changes have been made to BNSF costs for facilities. Moreover, the minor personnel changes for train and MOW crews discussed in Section III.D above do not require any changes in the buildings BNSF included in its March 1, 2005 Supplemental Evidence. Therefore, BNSF has made no changes to building and facilities costs.

8. Public Improvements

The total quantities of fences, gates, panels, and cattle guards have decreased as a result of the decrease in route miles. The number of roadway signs has been restated to account for the increase in double track and sidings. This results in an increase in roadway signs. The restated quantities are developed in BNSF electronic workpaper "III F OTRR Construction_Reply to Supp Evidence.xls" worksheet "Segment Data." There are no changes in snow fences.

The level of investment required for OTRR crossings is increased slightly as a result of the double tracking. A restatement of that investment can be found in electronic workpaper "III F 8 Crossings_Reply to Supp Evidence.xls." No changes were required for crossing protection or highway overpasses.

The adjustments in public improvements quantities are reflected in BNSF's restatement of the total costs for OTRR construction, contained in electronic workpaper "III F OTRR Construction_Reply to Supp Evidence.xls" worksheet "Total Cost."

9. Mobilization

BNSF has applied the 3.5 percent additive discussed in its previous filings to the restated construction costs to determine mobilization and demobilization costs for the OTRR. The revised total costs are contained in electronic workpaper "III F OTRR Construction_Reply to Supp Evidence.xls" worksheet "Total Cost."

10. Engineering

BNSF followed the same procedures in developing the engineering costs in this Reply as in its previous filings. All engineering cost adjustments are contained in electronic workpaper “III F 10 Engineering_Reply to Supp Evidence.xls.”

11. Contingencies

BNSF applied a ten percent additive to the restated costs in this filing to cover contingencies, as shown in electronic workpaper “III F OTRR Construction_Reply to Supp Evidence.xls” worksheet “Total Cost.”

Table III.F-1 below summarizes the differences in road property investment costs between Otter Tail’s Supplemental Evidence Errata and BNSF’s Reply to Supplemental Evidence.

BNSF Table III.F-1
Comparison of Otter Tail Supplemental Evidence Errata and
BNSF Reply to Supplemental Evidence
Road Property Investment Cost

Road Property Investment Account	Otter Tail (\$000,000)	BNSF (\$000,000)	Difference (\$000,000)
1. Land	\$42	\$76	\$35
2. Roadbed Preparation	\$586	\$1,386	\$800
3. Track	\$847	\$1,008	\$160
4. Tunnels	\$0	\$0	\$0
5. Bridges and Culverts	\$152	\$279	\$127
6. Signals and Communications	\$204	\$252	\$49
7. Buildings and Facilities	\$31	\$94	\$64
8. Public Improvements	\$31	\$48	\$17
9. Mobilization/Demobilization	\$44	\$81	\$37
10. Engineering	\$168	\$425	\$257
11. Contingencies	\$206	\$357	\$151
TOTAL	\$2,310	\$4,005	\$1,696

Totals may not equal the sums of the parts due to rounding.

III. G. Discounted Cash
Flow Analysis

G. DISCOUNTED CASH FLOW ANALYSIS

BNSF has made no changes to the discounted cash flow methodology it used in its March 1, 2005 Supplemental Evidence.

III.H: Results of SAC
Analysis

H. RESULTS OF SAC ANALYSIS

BNSF has restated the DCF results to reflect the revisions in costs described above. The new results, based on DARA revenues, are set forth in Reply to Supp. Exhibit III.H-1. The new results, based on MSP (modified origin blocks) revenues, are set forth in Reply to Supp. Exh. III.H-2. The methodologies used in these DCF analyses are the same as those described in Section III.H of BNSF's October 8, 2003 Reply Evidence. Table III.H-1 below summarizes the DCF results, based on DARA revenues, for BNSF's Reply to Supplemental Evidence. Table III.H-2 below summarizes the DCF results, based upon MSP (modified origin blocks) revenues, for BNSF's Reply to Supplemental Evidence.

Table III.H-1
Summary Of Stand-Alone Cost Results Based on
DARA Revenues
(All Figures In Millions Of Dollars)

Year	Annual Revenue	Stand-Alone Cost	Difference
2002	\$474.9	\$740.4	(\$265.6)
2003	\$472.0	\$735.0	(\$263.0)
2004	\$480.0	\$758.7	(\$278.7)
2005	\$485.6	\$795.9	(\$310.3)
2006	\$496.7	\$820.7	(\$324.0)
2007	\$489.3	\$841.3	(\$352.0)
2008	\$504.4	\$865.4	(\$360.9)
2009	\$518.8	\$890.5	(\$371.7)
2010	\$535.9	\$918.7	(\$382.8)
2011	\$547.9	\$945.4	(\$397.5)
2012	\$553.0	\$972.1	(\$419.0)
2013	\$561.4	\$999.0	(\$437.6)
2014	\$565.9	\$1,027.2	(\$461.3)
2015	\$575.6	\$1,056.4	(\$480.8)
2016	\$585.8	\$1,086.6	(\$500.8)
2017	\$596.2	\$1,117.8	(\$521.7)
2018	\$606.4	\$1,149.7	(\$543.3)
2019	\$616.9	\$1,182.6	(\$565.7)
2020	\$627.6	\$1,216.4	(\$588.8)
2021	\$637.0	\$1,250.9	(\$613.8)

Table III.H-2
Summary Of Stand-Alone Cost Results Based on
Modified MSP Revenues
(All Figures In Millions Of Dollars)

Year	Annual Revenue	Stand-Alone Cost	Difference
2002	\$485.6	\$740.4	(\$254.9)
2003	\$480.8	\$735.0	(\$254.2)
2004	\$488.8	\$758.7	(\$269.9)
2005	\$494.6	\$795.9	(\$301.3)
2006	\$505.7	\$820.7	(\$315.0)
2007	\$498.4	\$841.3	(\$342.9)
2008	\$513.8	\$865.4	(\$351.6)
2009	\$528.4	\$890.5	(\$362.1)
2010	\$545.7	\$918.7	(\$372.9)
2011	\$558.0	\$945.4	(\$387.4)
2012	\$562.4	\$972.1	(\$409.7)
2013	\$570.7	\$999.0	(\$428.3)
2014	\$575.1	\$1,027.2	(\$452.1)
2015	\$585.0	\$1,056.4	(\$471.4)
2016	\$595.3	\$1,086.6	(\$491.3)
2017	\$605.7	\$1,117.8	(\$512.1)
2018	\$616.1	\$1,149.7	(\$533.6)
2019	\$626.7	\$1,182.6	(\$555.9)
2020	\$637.5	\$1,216.4	(\$578.9)
2021	\$647.2	\$1,250.9	(\$603.6)

IV: Witness Qualifications
and Verifications

IV. WITNESS VERIFICATIONS

1. Gerald G. Albin

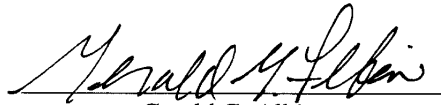
Gerald G. Albin is a Principal and Vice President of TranSystems Corporation, a civil engineering company located in Denver, Colorado. His business address is 4949 S. Syracuse, Suite 620, Denver, CO 80237. Mr. Albin's qualifications appear in Section IV of BNSF's Supplemental Reply Evidence submitted to the Board on March 22, 2004.

In BNSF's October 8, 2003 Reply Evidence, March 22, 2004 Supplemental Reply Evidence, and March 1, 2005 Supplemental Evidence, Mr. Albin sponsors evidence relating to maintenance-of-way costs set forth in Section III.D.4. To the extent that changes have been made to the evidence presented in those Sections in this Reply to Supplemental Evidence, Mr. Albin sponsors those changes. Mr. Albin has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

o

I declare under penalty of perjury that I have read the Reply to the Supplemental Evidence that I have sponsored, as described in the foregoing Statement of Qualifications, and that the contents thereof are true and correct. Further, I certify that I am qualified and authorized to sponsor this testimony.

Executed on March 31, 2005


Gerald G. Albin

Michael R. Baranowski

Michael R. Baranowski is a Senior Managing Director at FTI Consulting, Inc., an economic and financial consulting firm. His business address is 1201 Eye Street, N.W., Suite 400, Washington, DC 20005. Mr. Baranowski's qualifications appear in Section IV of BNSF's Supplemental Reply Evidence submitted to the Board on March 22, 2004.

In BNSF's October 8, 2003 Reply Evidence, March 22, 2004 Supplemental Reply Evidence and March 1, 2005 Supplemental Evidence, Mr. Baranowski sponsored evidence relating to Section III.F.2 Roadbed Preparation, III.F.8 Public Improvements, and the Board's DCF model and SAC calculations contained in Sections III.G and III.H. In addition, Mr. Baranowski also sponsored evidence relating to the cross-subsidy analysis in Section III.A of BNSF's March 1, 2005 Supplemental Evidence. To the extent that changes have been made to the evidence presented in those Sections in this Reply to Supplemental Evidence, Mr. Baranowski sponsors those changes. Mr. Baranowski has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

I declare under penalty of perjury that I have read the Reply to Supplemental Evidence that I have sponsored, as described in the foregoing Statement of Qualifications, and that the contents thereof are true and correct. Further, I certify that I am qualified and authorized to sponsor this testimony.

Executed on April 1, 2005


Michael R. Baranowski

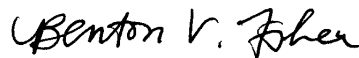
Benton V. Fisher

Benton V. Fisher is a Managing Director at FTI Consulting, Inc., an economic and financial consulting firm with offices located at 1201 Eye Street, N.W., Suite 400, Washington, DC, 20005. Mr. Fisher's qualifications appear in Section IV of BNSF's Supplemental Reply Evidence submitted to the Board on March 22, 2004.

In BNSF's October 8, 2003 Reply Evidence, March 22, 2004 Supplemental Reply Evidence and March 1, 2005 Supplemental Evidence, Mr. Fisher sponsored evidence relating to BNSF's variable costs for the issue movement as well as evidence relating to excluded non-coal traffic, revenue divisions and T&E salaries for the OTRR. His evidence was incorporated in Sections III.A. and III.D.3 of the Narrative. Additionally, Mr. Fisher sponsored evidence incorporated in Sections III.D.5 through III.D.9 of BNSF's March 1, 2005 Supplemental Evidence. To the extent that changes have been made to the evidence presented in those Sections in the Reply to Supplemental Evidence, Mr. Fisher sponsors those changes. Mr. Fisher has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

I declare under penalty of perjury that I have read the Reply to Supplemental Evidence that I have sponsored, as described in the foregoing Statement of Qualifications, and that the contents thereof are true and correct. Further, I certify that I am qualified and authorized to sponsor this testimony.

Executed on March 31, 2005

A handwritten signature in cursive script that reads "Benton V. Fisher". The signature is written in dark ink and is positioned above a horizontal line.

Benton V. Fisher

Cassie M. Gouger, P.E.

Cassie M. Gouger is a Manager at FTI Consulting, Inc., an economic and financial consulting firm with offices located at 1201 Eye Street, N.W., Suite 400, Washington, DC, 20005. Ms. Gouger's qualifications appear in Section IV of BNSF's Supplemental Evidence submitted to the Board on March 1, 2005.

In BNSF's March 1, 2005 Supplemental Evidence, Ms. Gouger sponsored the adjustments in construction costs in Section III.F (except for facilities in Section III.F.7) related to the capacity improvements described in BNSF's Supplemental Evidence. She also sponsored the revised track schematics related to the changes in tons and track miles between BNSF's March 22, 2004 Supplemental Reply and March 1, 2005 Supplemental Evidence. To the extent that changes have been made to the evidence presented in these Sections in the Reply to Supplemental Evidence, Ms. Gouger sponsors those changes. Ms. Gouger has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

I declare under penalty of perjury that I have read the Reply to Supplemental Evidence that I have sponsored, as described in the foregoing Statement of Qualifications, and that the contents thereof are true and correct. Further, I certify that I am qualified and authorized to sponsor this testimony.

Executed on April 1, 2005

Cassie M. Gouger
Cassie M. Gouger


John C. Klick

John C. Klick is the Executive Vice President of the economic and financial consulting firm of FTI Consulting, Inc. The firm's offices are located at 1201 Eye Street, N.W., Suite 400, Washington, DC 20005. Mr. Klick's qualifications appear in Section IV of BNSF's Supplemental Reply Evidence submitted to the Board on March 22, 2004.

In BNSF's October 8, 2003 Reply Evidence, March 22, 2004 Supplemental Reply Evidence and March 1, 2005 Supplemental Evidence, Mr. Klick sponsored evidence regarding flaws in Otter Tail's volume and revenue assumptions, Otter Tail's cross-over revenue divisions methodologies and revenue forecasts. He also sponsored evidence regarding BNSF's modified volume and revenue assumptions, including testimony regarding the development and implementation of BNSF's proposed density adjusted revenue allocation ("DARA") procedure and interpreted the results of his DARA calculations. That evidence was incorporated in Section III.A of the Narrative. In addition, Mr. Klick also sponsored evidence relating to the cross-subsidy analysis in Section III.A of BNSF's March 1, 2005 Supplemental Evidence. To the extent that changes have been made to the evidence presented in that Section, Mr. Klick sponsors those changes. Mr. Klick has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

I declare under penalty of perjury that I have read the Reply to Supplemental Evidence that I have sponsored, as described in the foregoing Statement of Qualifications, and that the contents thereof are true and correct. Further, I certify that I am qualified and authorized to sponsor this testimony.

Executed on April 1, 2005



John C. Klick


Loren E. Mueller

Loren E. Mueller is a railroad transportation consultant. His business address is 614 Regency Crossing, Southlake, TX 76092. Mr. Mueller's qualifications appear in Section IV of BNSF's Supplemental Reply Evidence submitted to the Board on March 22, 2004.

In BNSF's October 8, 2003 Reply Evidence, March 22, 2004 Supplemental Reply Evidence and March 1, 2005 Supplemental Evidence, Mr. Mueller sponsored evidence relating to operations of the stand-alone railroad. His evidence was incorporated in Sections III.B.3, III.C and III.D.3 of the Narrative. To the extent that changes have been made to the evidence presented in those Sections in the Reply to Supplemental Evidence, Mr. Mueller sponsors those changes. Mr. Mueller has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

I declare under penalty of perjury that I have read the Reply to Supplemental Evidence that I have sponsored, as described in the foregoing Statement of Qualifications, and that the contents thereof are true and correct. Further, I certify that I am qualified and authorized to sponsor this testimony.

Executed on April 1, 2005


Loren E. Mueller

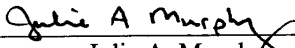
Julie A. Murphy

Julie A. Murphy is a Principal with LECG, LLC, an economic and financial consulting firm. Her business address is 1725 Eye Street, Suite 800, Washington DC 20006. Ms. Murphy qualifications appear in Section IV of BNSF's Supplemental Reply Evidence submitted to the Board on March 22, 2004.

In BNSF's October 8, 2003 Reply Evidence, March 22, 2004 Supplemental Reply Evidence and March 1, 2005 Supplemental Evidence, Ms. Murphy sponsored evidence in Section III.A regarding flaws in Otter Tail's volume and revenue assumptions, Otter Tail's cross-over revenue divisions methodologies and revenue forecasts. She also sponsored evidence regarding BNSF's modified volume and revenue assumptions. To the extent that changes have been made to the evidence presented in that Section in the Reply to Supplemental Evidence, Ms. Murphy sponsors those changes. Ms. Murphy has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

I declare under penalty of perjury that I have read the Reply to Supplemental Evidence that I have sponsored, as described in the foregoing Statement of Qualifications, and that the contents thereof are true and correct. Further, I certify that I am qualified and authorized to sponsor this testimony.

Executed on April 1, 2005


Julie A. Murphy


Robert J. Plum, III

Robert J. Plum, III, is a Managing Director of FTI Consulting, Inc. ("FTI"), with offices at 1201 Eye Street, N.W., Suite 400, Washington, DC 20005. Mr. Plum's qualifications appear in Section IV of BNSF's Supplemental Reply Evidence submitted to the Board on March 22, 2004.

In BNSF's October 8, 2003 Reply Evidence, March 22, 2004 Supplemental Reply Evidence and March 1, 2005 Supplemental Evidence, Mr. Plum sponsored evidence relating to BNSF's variable costs for the issue movement, OTRR route miles, and the number of locomotives and railcars required by OTRR. His evidence was incorporated in Sections II.A, III.B.1, and III.C.2 of the Narrative. Mr. Plum also sponsored evidence concerning the calculation of the revised number of crew personnel required for the OTRR contained in Section III.D.3. Mr. Plum also sponsored evidence concerning recalculation of locomotive and car costs contained in Sections III.D.1 and III.D.2 of BNSF's March 1, 2005 Supplemental Evidence. To the extent that changes have been made to the evidence presented in those Sections in the Reply to Supplemental Evidence, Mr. Plum sponsors those changes. Mr. Plum has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

I declare under penalty of perjury that I have read the Reply to Supplemental Evidence that I have sponsored, as described in the foregoing Statement of Qualifications, and that the contents thereof are true and correct. Further, I certify that I am qualified and authorized to sponsor this testimony.

Executed on April 1, 2005


Robert J. Plum, III

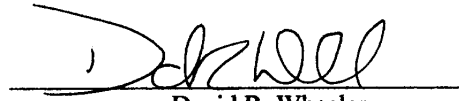
David R. Wheeler

David R. Wheeler is the founder and President of Rail Network Analytics. His business address is 9222 Nottingham Way, Mason, OH 45040. Mr. Wheeler's qualifications appear in Section IV of BNSF's Supplemental Reply Evidence submitted to the Board on March 22, 2004.

In BNSF's October 8, 2003 Reply Evidence, March 22, 2004 Supplemental Reply Evidence and March 1, 2005 Supplemental Evidence, Mr. Wheeler sponsored evidence relating to the OTRR's capacity requirements and cycle times, contained in Sections III.B.2, III.B.3 and III.C.2 of the Narrative. To the extent that changes have been made to the evidence presented in those Sections in the Reply to Supplemental Evidence, Mr. Wheeler sponsors those changes. Mr. Wheeler has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

I declare under penalty of perjury that I have read the Reply to Supplemental Evidence that I have sponsored, as described in the foregoing Statement of Qualifications, and that the contents thereof are true and correct. Further, I certify that I am qualified and authorized to sponsor this testimony.

Executed on April 1, 2005



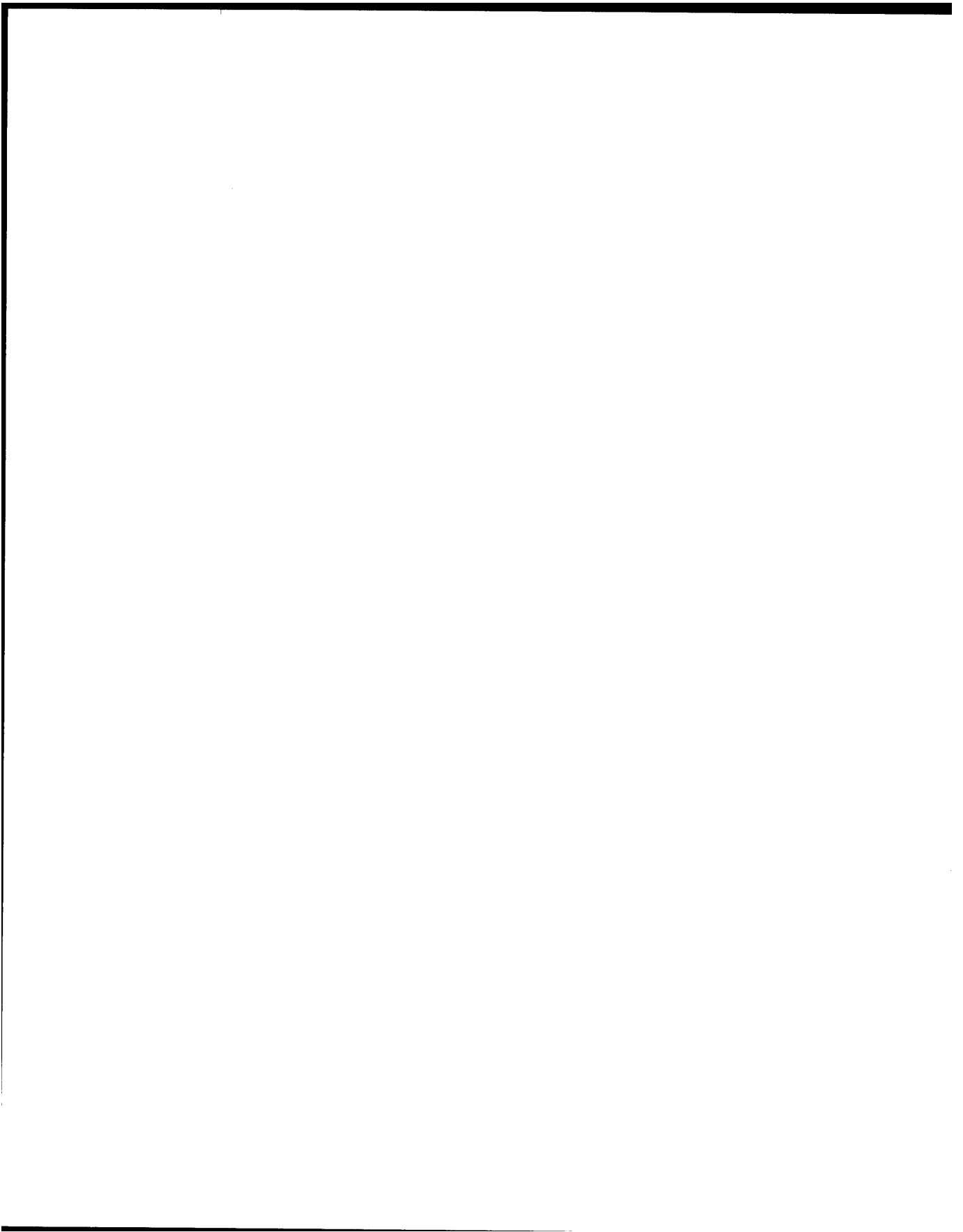
David R. Wheeler

EXHIBITS

III. A: Traffic Group

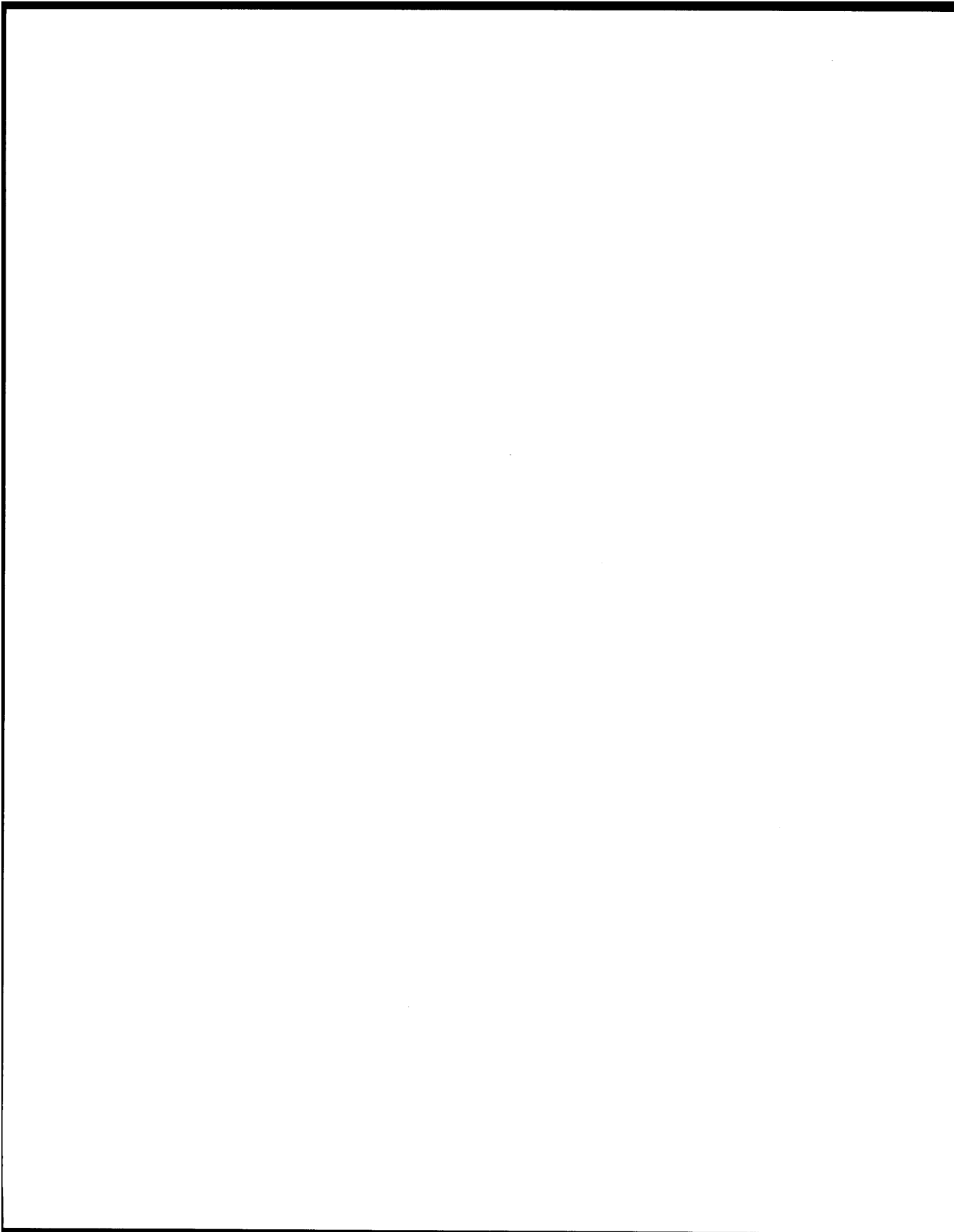
BNSF Reply to Supp. Exh. III.A-1

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BNSF Reply to Supp. Exh. III.A-2

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BNSF Reply to Supp. Exh. III.A-3

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III.C: Operating Plan

Reply to Supp. Exh III.C - 1

Comparison of Supplemental Evidence Transit times: OTP versus BNSF

Origin and Destination Pairs		BNSF Supplemental Evidence ¹ Origin to Destination Avg Runtime (DD:HH:MM:SS)		OTP Supplemental Evidence (Errata) ² Origin to Destination Avg Runtime (DD:HH:MM:SS)		OTP ERRATA vs BNSF ³ (difference in minutes)	
FROM	TO	LOAD	EMPTY	LOAD	EMPTY	LOAD	EMPTY
Belle Ayr	Donkey Creek	00:01:13:05	00:00:39:29	00:01:14:59	00:00:41:01	1.9	1.5
Caballo	Donkey Creek	00:01:06:11	00:01:29:20	00:01:14:08	00:00:33:26	8.0	(55.9)
Antelope	Donkey Creek	00:04:52:50	00:02:52:54				
Cordero	Donkey Creek	00:02:00:12	00:00:55:53	00:01:59:13	00:00:55:48	(1.0)	(0.1)
Jacobs Ranch	Donkey Creek	00:02:53:13	00:02:08:13		00:02:11:28		3.3
Nacco Jct	Donkey Creek	00:04:36:57	00:02:21:24		00:02:13:23		(8.0)
N. Rochelle	Donkey Creek	00:02:45:07	00:02:03:57				
Caballo Rojo	Donkey Creek	00:01:15:02	00:01:39:46	00:01:18:34	00:00:41:41	3.5	(58.1)
Thunder Jct	Donkey Creek	00:02:55:00	00:03:11:17		00:03:49:37		38.3
Belle Ayr	Converse	00:02:49:35	00:02:04:08	00:02:46:33	00:01:43:22	(3.0)	(20.8)
Caballo	Converse	00:02:38:58	00:02:58:53	00:02:17:20	00:02:13:32	(21.6)	(45.4)
Caballo Rojo	Converse	00:02:38:25	00:02:41:14	00:02:18:07	00:01:47:03	(20.3)	(54.2)
Thunder Jct	Converse	00:01:24:07	00:01:14:53	00:01:18:46	00:01:16:41	(7.3)	1.8
Antelope	Converse	00:00:12:21	00:00:07:40	00:00:07:29	00:00:52:41	(4.9)	45.0
Cordero	Converse	00:02:25:25	00:01:02:56	00:02:04:32	00:01:07:37	(20.9)	4.7
Jacobs Ranch	Converse	00:01:38:13	00:01:15:07	00:01:27:46	00:01:31:48	(10.5)	16.7
Nacco Jct	Converse	00:00:12:14	00:00:04:50	00:00:20:41	00:00:12:28	8.5	7.6
N. Rochelle	Converse	00:00:57:33	00:00:37:18	00:01:10:36	00:00:43:04	13.1	5.8
Buckskin	Donkey Creek	00:00:47:11	00:02:20:51	00:00:51:48	00:00:51:59	4.6	(88.9)
Clovis Pt	Donkey Creek						
Dry Fork	Donkey Creek	00:00:31:51	00:00:42:59	00:00:45:24	00:00:33:01	13.6	(10.0)
Eagle Butte	Donkey Creek	00:00:42:46	00:01:08:46	00:00:50:06	00:01:38:16	16.3	29.5
Rawhide	Donkey Creek	00:00:42:46	00:01:08:46	00:00:50:02	00:00:50:39	7.3	(18.1)
Eagle Butte	Converse	00:04:25:06	00:02:17:05		00:02:31:26		14.3
Buckskin	Converse	00:04:44:10	00:03:18:41	00:03:36:58	00:02:56:05	(67.2)	(22.6)
Clovis Pt	Converse	00:04:08:52	00:02:23:26	00:03:38:29	00:02:43:20	(30.4)	19.9
Dry Fork	Converse	00:04:25:06	00:02:17:05	00:03:52:16	00:03:06:54	(32.8)	49.8
S Fargo	N Benson	00:03:43:00	00:02:15:00	00:03:21:02	00:02:39:50	(22.0)	24.8
S Benson	Big Stone	00:00:28:00	00:00:48:00				
Gillette	Sheridan (697.4)	00:04:23:00	00:03:43:00	00:05:03:35	00:03:19:47	40.6	(23.2)
Gillette	Dutch Center	00:04:27:00	00:02:55:00	00:04:39:19	00:03:05:12	12.3	10.2
Sheridan (697.4)	Moran Jct	00:04:52:00	00:04:00:00	00:04:59:42	00:03:46:28	7.7	(13.5)
Sheridan (697.4)	Forsyth	00:07:37:00	00:06:34:00	00:07:14:07	00:05:53:12	(22.9)	(40.8)
Moran Jct	Forsyth			00:02:08:39	00:02:02:44		
Moran Jct	W Terry			00:04:05:17	00:04:22:24		
Forsyth	W Glendive	00:04:05:00	00:04:02:00	00:03:18:47	00:02:56:26	(46.2)	(66.6)
Moran Jct	Dutch Center			00:03:57:46	00:05:19:59		
NerJct	Dutch Center	00:02:15:00	00:01:16:00	00:00:39:54	00:00:33:45	(95.1)	(42.3)
Decker	Dutch Center	00:01:15:00	00:01:34:00	00:00:47:03	00:00:31:31	(28.0)	(62.5)
Kuehn	Forsyth	00:02:19:00	00:01:46:00	00:01:42:57	00:01:26:28	(36.1)	(19.5)
Big Sky-Energy	Forsyth	00:02:16:00	00:02:31:00	00:00:54:20	00:00:50:46	(81.7)	(100.2)
FROM	TO / CLASS	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
Donkey Creek	Gillette /C	00:00:17:09	00:00:21:42	00:00:19:57	00:00:20:06	2.8	(1.6)
Donkey Creek	Gillette /H	00:00:16:37	00:00:19:50	00:00:15:13	00:00:20:03	(1.4)	0.2
Donkey Creek	Gillette /M	00:00:15:22	00:00:17:21	00:00:15:01	00:00:29:45	(0.4)	12.4
Donkey Creek	Gillette /U		00:00:15:45	00:00:15:22	00:00:20:00		4.3
Donkey Creek	Gillette /S	00:00:15:24		00:00:18:34		3.2	
Donkey Creek	Gillette /V	00:00:15:33	00:00:17:25	00:00:16:21	00:00:21:46	0.8	4.4

Origin	Destination	Origin to Destination Avg Runtime (DD:HH:MM:SS)	Origin to Destination Avg Runtime (DD:HH:MM:SS)	OTP ERRATA vs BNSF
E. Glendive	W. Mandan	00:06:39:33	00:06:58:05	18.5
E. Mandan	Cassellton	00:04:59:39	00:05:33:16	33.6
Cassellton	W. Fargo Yard	00:00:25:11	00:00:21:22	(3.8)

Electronic Workpaper Cites:

1. BNSF Supp. Evidence electronic workpaper "Transit Times For Model v1 (Supp Evidence).xls"
2. a) Source file is Otter Tail Supp. Evidence Errata electronic workpaper "alternative case (errata).route"
b) BNSF Reply to Supp. Evidence electronic workpaper "Transit times - OTP Supplemental Evidence.zip"

Notes:

3. Negative number (in red) indicates OTP has shorter transit times than BNSF. Positive number (in black) indicates OTP has longer transit times than BNSF.

III.D: Operating Costs

Comparison of OTRR Road Crews				Reply To Supp Exhibit III.D.3-1	
	OTP Supp Evidence Alternative Case	OTP Supp Evidence Errata - Alternative Case	% Difference	BNSF Supp Evidence Reply 4/	% Difference: BNSF vs OTP
Year 2021 Oct 12-18 Statistics					
Coal	1,154	1,067	-8% 1/		
Non-Coal	183	183	0% 1/		
Total:	1,337	1,250	-7%		
Annualized 2021 Road Crew Starts					
Coal	60,173	55,636	-8% 2/	48,621	
Non-Coal	9,542	9,542	0% 2/	15,040	
Total:	69,715	65,179	-7%	63,661	-2%
Coal					
Year 2021 Oct 12-18 Volume Annualized	217,628,226	214,656,578	1/		
Year 2002 Volume	180,359,479	180,359,479	1/		
Coal De-Peaking Factor:	83%	84%			
Non-Coal					
Year 2021 Oct 12-18 Volume Annualized	22,775,009	22,891,236	1/		
Year 2002 Volume	18,720,668	18,720,668	1/		
Non-Coal De-Peaking Factor:	82%	82%			
Annualized 2002 Road Crew Starts					
Coal	49,868	46,747	-6% 3/	44,707	
Non-Coal	7,843	7,804	-1% 3/	15,040	
Total:	57,712	54,551	-5%	59,747	10%
Base Year 2002 Road Crews					
Total Road Crews:	430	407	-5% 1/	444	9%
1/ Source: OTP Supplemental Evidence and Supplemental Evidence Errata electronic workpaper "Service Units_XGF.xls"					
2/ Annualized by multiplying Oct. 12-18 figure by 365 and dividing by 7days.					
3/ Calculated by using annualized 2021 road crew starts and multiplying by either coal or non-coal de-peaking factor.					
4/ Source - BNSF Supplemental Evidence Reply electronic workpaper "LUMs and Carmiles (OTP-BNSF) (Supp Evidence Reply).xls"					

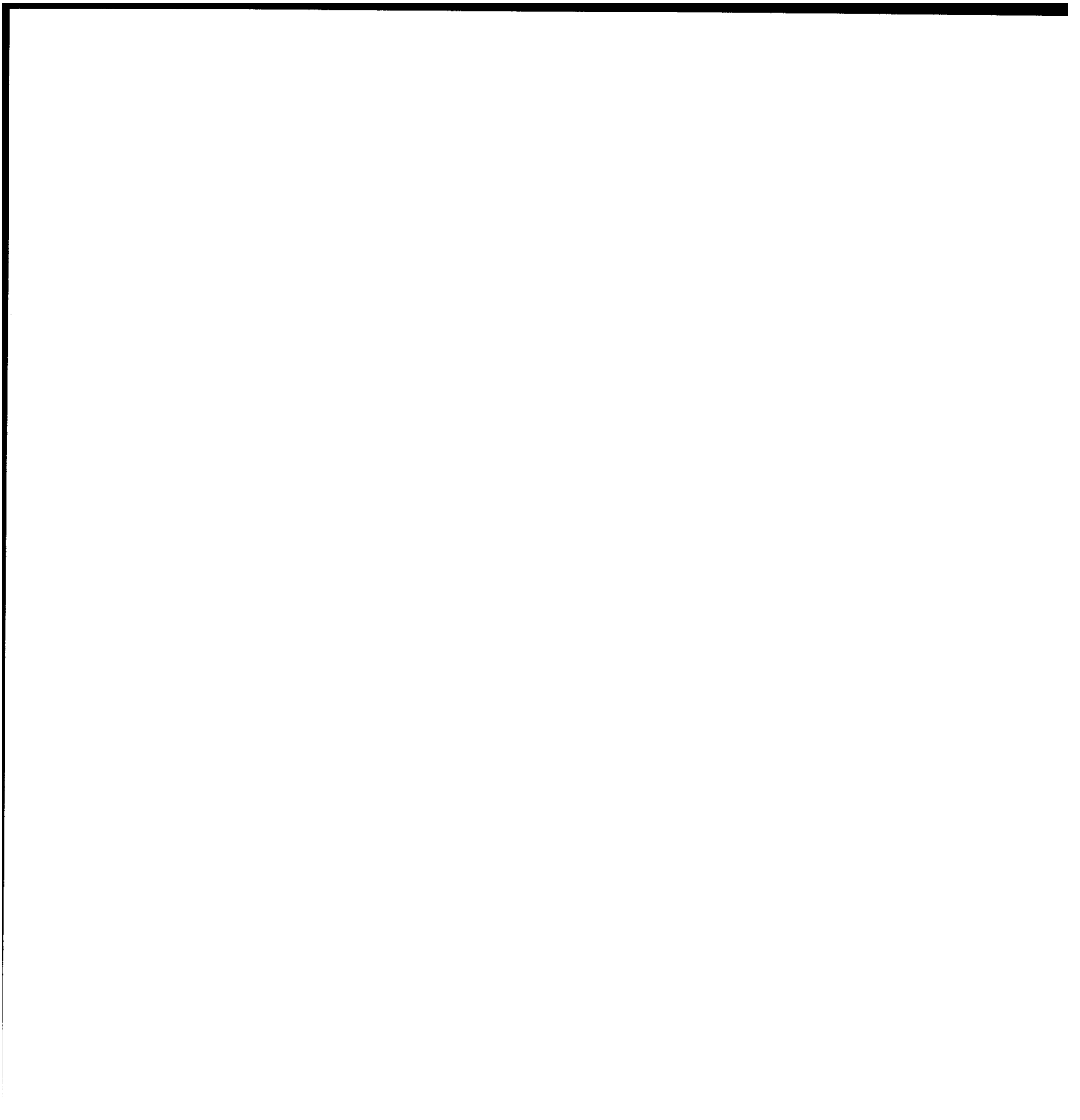


BNSF Reply to Supp. Exh. III.D.4-1

Redacted

III.F: Road Property
Investment

Redacted



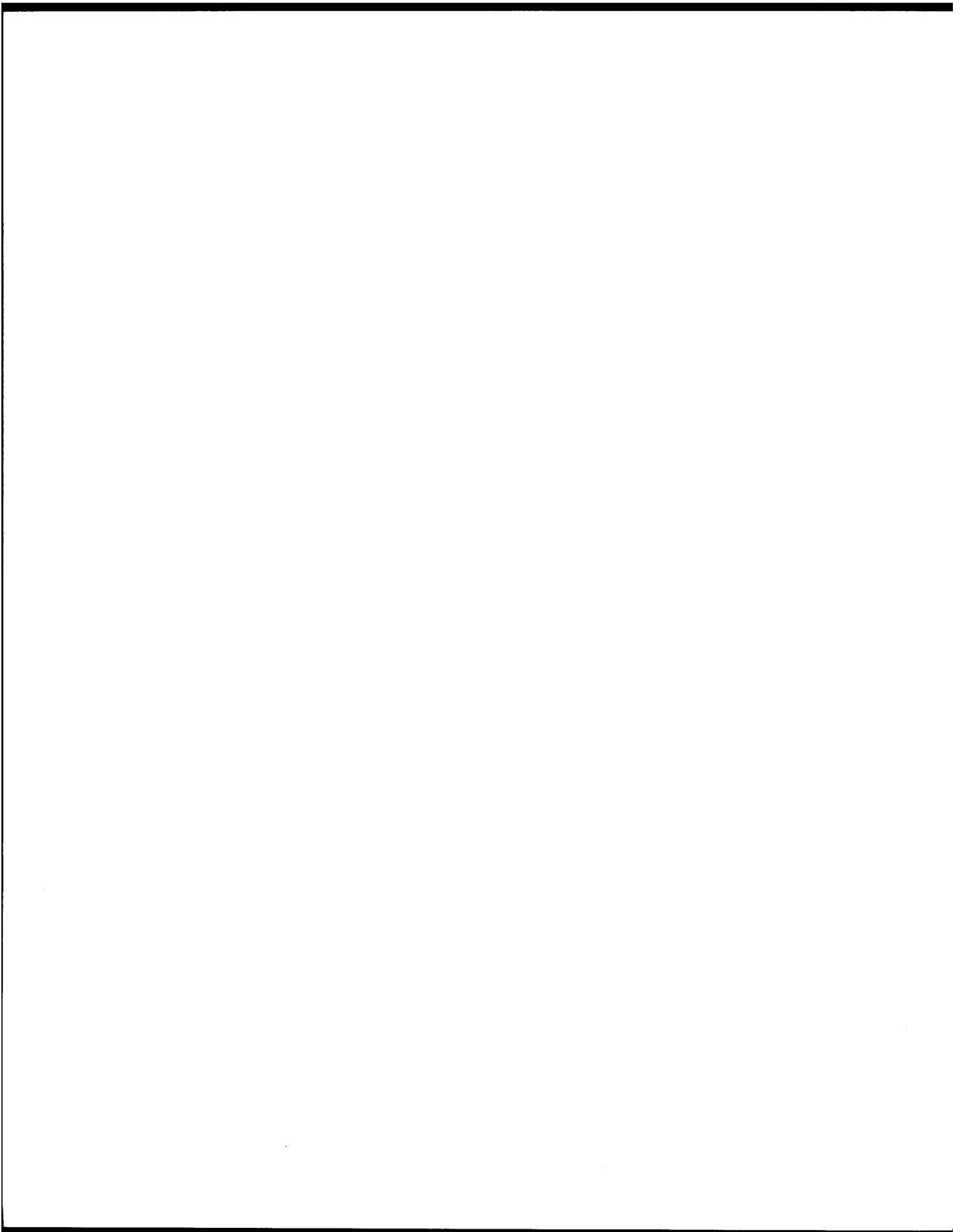
BNSF Reply to Supp. Exh. III.F-2

Redacted

III. H: Results of SAC
Analysis

BNSF Reply to Supp. Exh. III.H-1

Redacted



BNSF Reply to Supp. Exh. III.H-2

Redacted